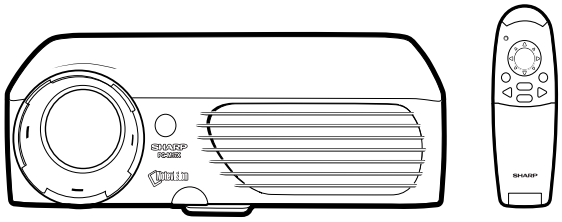
SHARP SERVICE MANUAL
SERVICE-ANLEITUNG

DIGITAL MULTIMEDIA PROJECTOR
DIGITALER MULTIMEDIA PROJEKTOR



MODEL
MODELL **PG-M17X**

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzersicherheit (erforderliche Sicherheitsregeln in einigen Ländern) muß das Gerät in seinen Originalzustand gebracht werden. Außerdem dürfen für die spezifizierten Bauteile nur identische Teile verwendet werden.

SHARP CORPORATION

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Specifications

Model	PG-M17X
Light Valve	Single Chip DLP™ Technology
Lamp	150W P-VIP Lamp
Number of Pixels	1024 pixels (H) x 768 lines (V)
Displayable Color	16.7M colors
Projection Lens	F/2.44~2.69 f=28.8~34.5mm with 1.2X zoom & focus
Projection Screen Size	23.4"~295.3" Diagonal
Projection Distance	3.74~39.37ft (1.14m~12m)
Video Compatibility	NTSC/NTSC4.43/PAL/PAL-M/PAL-N/SECAM and HDTV compatible Composite video & S-Video capability
H. Frequency	15kHz~100kHz horizontal scan
V. Frequency	43Hz~120Hz vertical refresh
Multimedia Audio	One internal speakers with 2 watts output
Power Supply	Universal AC input 100~240V; Input Frequency 50/60Hz
Power Consumption	190 watts at normal operation
Noise Level	35dBA
I/O Connectors	Power: AC power input socket Computer Input: One 35pin VESA M1-DA for Analog RGB Digital/Component Video/HDTV/USB mouse One RS232 input Computer Output: One 15pin D-sub computer output Video Input: One Composite video RCA input One S-Video input Audio Input: One phone jack for mono audio input
Weight	3.97lbs(1.8kgs)
Dimensions (W x H x D)	Without lens: 9.68 x 8.05 x 2.8 inches (246 x 204 x71 mm) With lens: 9.68 x 8.73 x 3.1 inches (246 x 222 x79 mm)
Environmental	Operating Temperature: 41°F~95°F (5°C~35°C) Humidity:80% maximum Storage Temperature: -4°F~140°F (-20°C~60°C) Humidity:80% maximum
Supplied Accessories	Remote Control, Battery, AC Cord for Europe (1.8m), RS-232(Blue) to MINI DIN 3pin cable (1.8m), Composite video cable (1.8m), S-VHS cable (2m), M1-A to VGA/USB(A) cable (1.8m), MINI Jack to MINI Jack cable, Soft carry bag, Lens cover, Operation manual, Quick start card multilingual
Replacement Parts	Remote Control(9HJ7089211001), Battery (9HJ4680301001), AC Cord for Europe (1.8m)(9HJ4283116001), RS-232(BLUE) to MINI DIN 3pin cable (1.8m) (9HJ4286301001), Composite video cable (1.8m) (9HJ4287205001), S-VHS cable (2m) (9HJ4287217001), M1-A to VGA/USB(A) cable (1.8m) (9HJ4287213001), MINI Jack to MINI Jack cable (9HJ4287215001), Soft carry bag (9HJ5386304021), Lens cover (9HJ7587801001), Operation manual (9HJ3689203001), Quick start card multilingual (9HJ3689202001)

This SHARP projector uses a DMD panel.This very sophisticated panel contains 786,432 pixels. As with any high technology electronic equipment such as large screen TVs, video systems and video cameras,there are certain acceptable tolerances that the equipment must conform to.

This unit has some inactive pixels within acceptable tolerances which may result in inactive dots on the picture screen.This will not affect the picture quality or the life expectancy of the unit.

Specifications are subject to change without notice.

NOTE TO SERVICE PERSONNEL

UV-RADIATION PRECAUTION

The light source, metal halide lamp, in the projector emits small amounts of UV-Radiation.

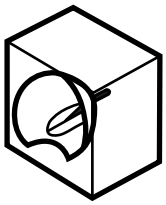
AVOID DIRECT EYE AND SKIN EXPOSURE.

To ensure safety please adhere to the following:

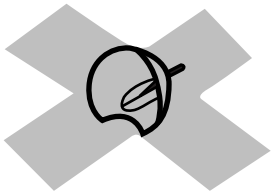
1. Be sure to wear sun-glasses when servicing the projector with the lamp turned “on” and the top enclosure removed.



2. Do not operate the lamp outside of the lamp housing.



3. Do not operate for more than 2 hours with the enclosure removed.



UV-Radiation and Medium Pressure Lamp Precautions

1. Be sure to disconnect the AC plug when replacing the lamp.
2. Allow one hour for the unit to cool down before servicing.
3. Replace only with same type lamp. Type 9HJ7089214001 or BQC-PGM17X//1 rated 150W.
4. The lamp emits small amounts of UV-Radiation, avoid direct-eye contact.
5. The medium pressure lamp involves a risk of explosion. Be sure to follow installation instructions described below and handle the lamp with care.

NOTE POUR LE PERSONNEL D’ENTRETIEN

PRECAUTION POUR LES RADIATIONS UV

La source de lumière, la lampe métal halide, dans le projecteur émet de petites quantités de radiation UV.

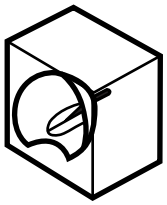
EVITEZ TOUTE EXPOSITION DIRECTE DES YEUX ET DE LA PEAU.

Pour votre sécurité, nous vous prions de respecter les points suivants:

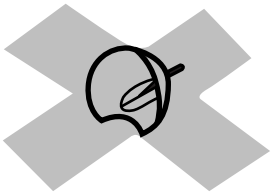
1. Toujours porter des lunettes de soleil lors d’un entretien du projecteur avec la lampe allumée et le haut du coffret retiré.



2. Ne pas faire fonctionner la lampe à l’extérieur du boîtier de lampe.



3. Ne pas faire fonctionner plus de 2 heures avec le coffret retiré.



Précautions pour les radiations UV et la lampe moyenne pression

1. Toujours débrancher la fiche AC lors du remplacement de la lampe.
2. Laisser l’unité refroidir pendant une heure avant de procéder à l’entretien.
3. Ne remplacer qu’avec une lampe du même type. Type 9HJ7089214001 ou BQC-PGM17X//1 caractéristique 150W.
4. La lampe émet de petites quantités de radiation UV- éviter tout contact direct avec les yeux.
5. La lampe moyenne pression implique un risque d’explosion. Toujours suivre les instructions d’installation décrites ci-dessous et manipuler la lampe avec soin.

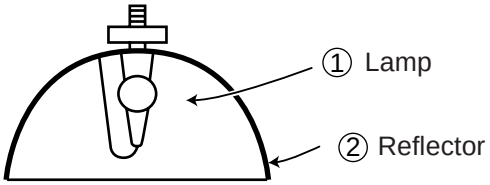
UV-RADIATION PRECAUTION (Continued)

■ Lamp Replacement

Note:

Since the lamp reaches a very high temperature during units operation replacement of the lamp should be done at least one hour after the power has been turned off. (to allow the lamp to cool off.) Installing the new lamp, make sure not to touch the lamp (bulb) replace the lamp by holding its reflector ②.

[Use original replacement only.]



DANGER ! — Never turn the power on without the lamp to avoid electric-shock or damage of the devices since the stabilizer generates high voltages at its start.

Since small amounts of UV-Radiation are emitted from an opening between the duct cover and the lamp housing, it is recommended to place the LENS CAP on the opening during servicing to avoid eye and skin exposure (Fig. 1).

Note: Please obtain a lens cap before servicing a models PG-M17X that is received without one.

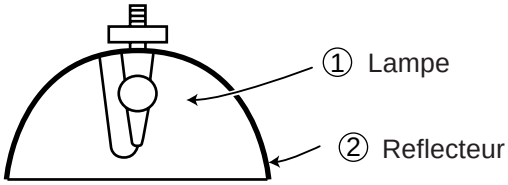
PRECAUTION POUR LES RADIATIONS UV (Suite)

■ Remplacement de la lampe

Remarque:

Comme la lampe devient très chaude pendant le fonctionnement de l'unité, son remplacement ne doit être effectué au moins une heure après avoir coupé l'alimentation (pour permettre à la lampe de refroidir). En installant la nouvelle lampe, s'assurer de ne pas toucher la lampe (ampoule). Remplacer la lampe en tenant son réflecteur ②.

[N'utiliser qu'un remplacement d'origine.]



DANGER ! — Ne jamais mettre sous tension sans la lampe pour éviter un choc électrique ou des dommages des appareils car le stabilisateur génère de hautes tensions à sa mise en route.

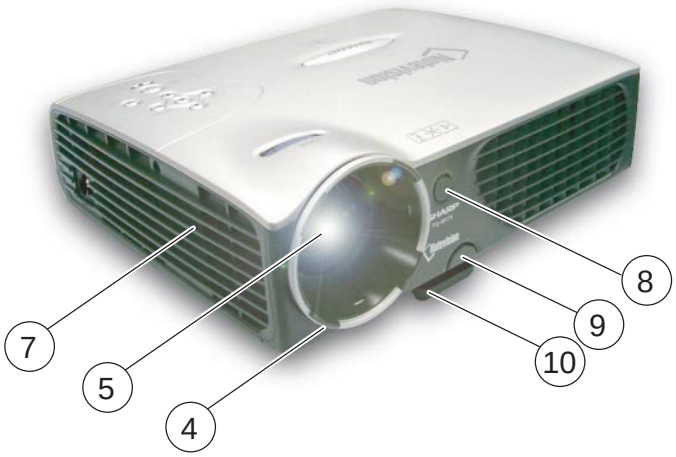
Comme de petites quantités de radiation UV sont émises par une ouverture entre le couvercle du conduit et le botier de la lampe,il est recommandé de placer le CAPUCHON D'OPTIQUE sur l'ouverture pendant l'entretien pour éviter une exposition des yeux et la peau (Fig. 1).

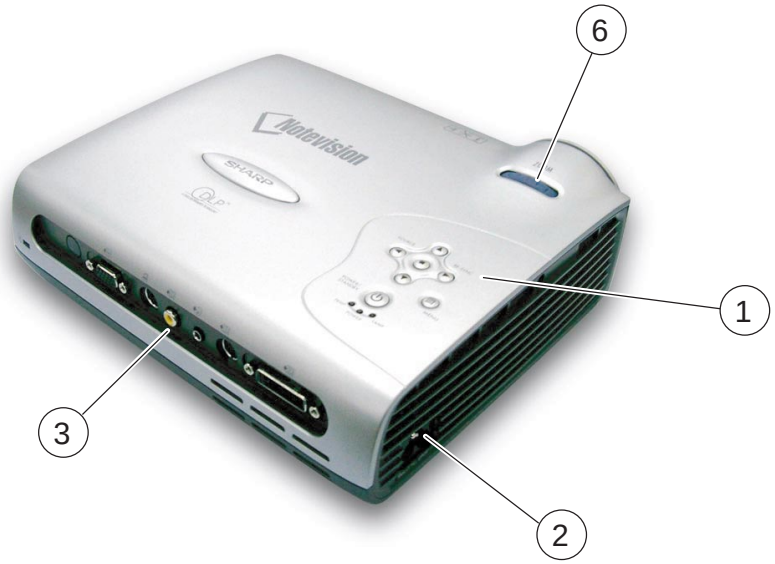
Remarque: Priére de se procurer un capuchon d'optique acant d'entretien un modéle PG-M17X qui est livré sans.

OPERATION MANUAL

Projector

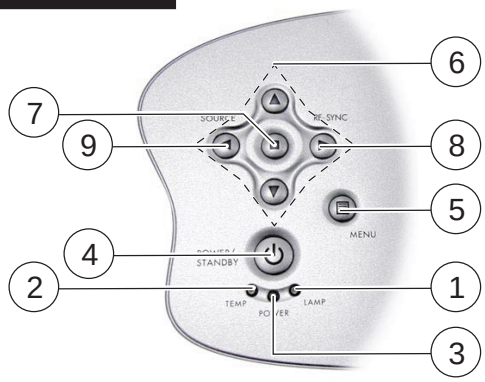
Overview





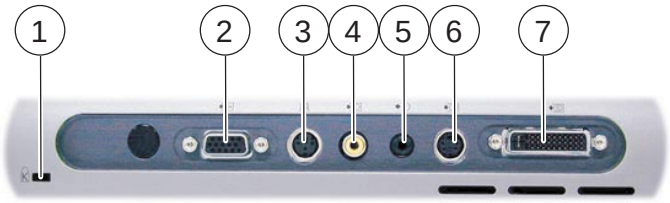
1. Panel Control
2. Power Connector
3. Connection Ports
4. Focus Ring
5. Zoom Lens
6. Zoom Ring
7. Speaker
8. Remote Control Receiver
9. Elevator Button
10. Elevator Foot

Panel Control view



1. Lamp Warning LED
2. Temperature Warning LED
3. Power Indicator Light
4. Power / Standby
5. Menu (On / Off)
6. Four Directional Select Keys
7. Enter
8. Re-sync
9. Source

Rear view



1. Kensington™ Lock Hole
2. Monitor Loop-Through Connector
3. RS232 Input Connector
4. Composite Video Input Connector
5. Audio Input
6. S-Video Input Connector
7. VESA M1-DA Analog RGB / Digital / HDTV / Component Video / USB Mouse Input Connector

Remote Control

Front view

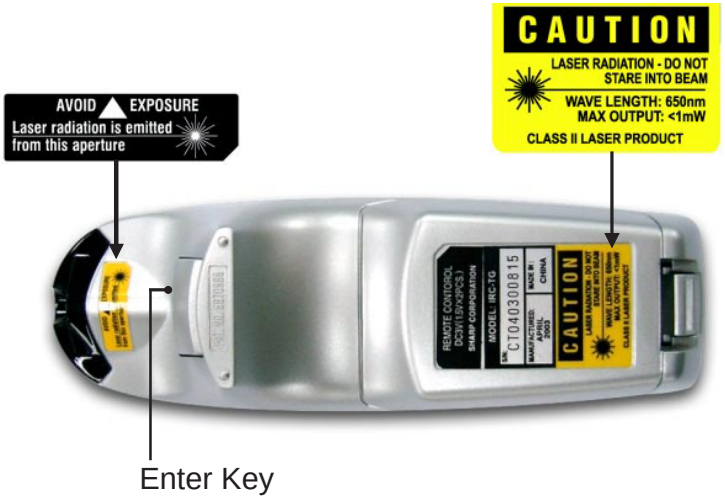
⚠ **Caution** : Use of controls or adjustments, or performance of procedures other than those specified herein may result in hazardous radiation exposure.



❖ Close the cover of the remote control when you want to use the remote mouse.

Rear view

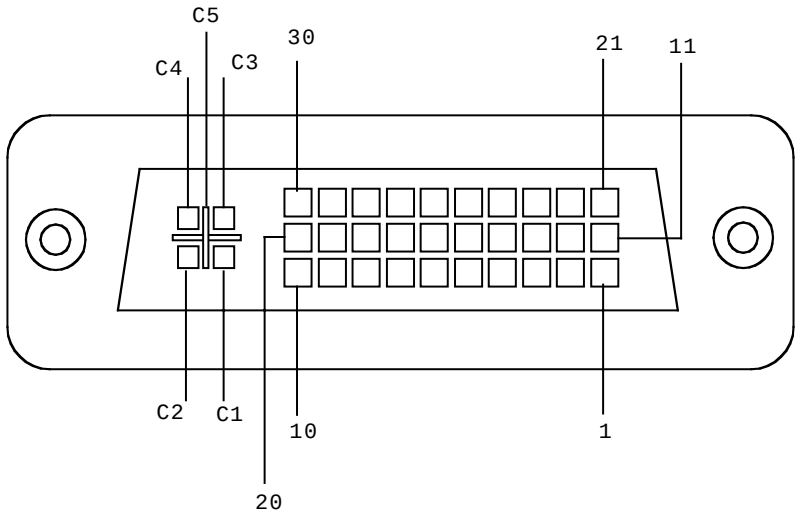
⚠ **Caution** : To reduce the risk of injury to the eyes, do not look directly into the laser light on the remote control and do not point the laser light into anyone's eyes.
This remote control is equipped with a Class Ⅱ laser that emits radiation.



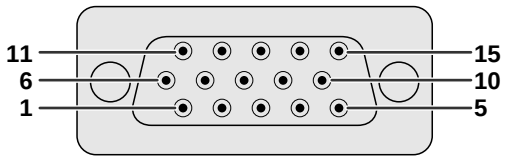
Connection Pin Assignments

DVI INPUT Port :35pin

	DVI Input	RGB Input	COMPONENT Input
Pin No.	**Name**	**Name**	**Name**
1	TMDS Data2+	Not connected	Not connected
2	TMDS Data2-	Not connected	Not connected
3	TMDS Data2 Return	Not connected	Not connected
4	H &V Sync Rtn/ TMDS Clock Rtn	H &V Sync Rtn	H &V Sync Rtn
5	Horizontal Sync.	Horizontal Sync.	Horizontal Sync.
6	Vertical Sync.	Vertical Sync.	Vertical Sync.
7	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
8	Hot Plug Detect (+5V DC Output)	Hot Plug Detect (+5V DC Output)	Hot Plug Detect (+5V DC Output)
9	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
10	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
11	TMDS Data1+	Not connected	Not connected
12	TMDS Data1-	Not connected	Not connected
13	TMDS Data1 Return	Not connected	Not connected
14	TMDS Clock+	Not connected	Not connected
15	TMDS Clock-	Not connected	Not connected
16	USB Data+	USB Data+	USB Data+
17	USB Data-	USB Data-	USB Data-
18	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
19	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
20	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
21	TMDS Data0+	Not connected	Not connected
22	TMDS Data0-	Not connected	Not connected
23	TMDS Data0 Return	Not connected	Not connected
24	USB +5V DC Input	USB +5V DC Input	USB +5V DC Input
25	DDC & USB Return	DDC & USB Return	DDC & USB Return
26	DDC Data (SDA)	DDC Data (SDA)	DDC Data (SDA)
27	DDC Clock (SCL)	DDC Clock (SCL)	DDC Clock (SCL)
28	DDC +5V DC Input	DDC +5V DC Input	DDC +5V DC Input
29	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
30	Reserved for Future VESA Use	Reserved for Future VESA Use	Reserved for Future VESA Use
C1	Red Video in	Red Video in	Pr in
C2	Green Video in	Green Video in	Y in
C3	Analog Cable Detect	Analog Cable Detect	Analog Cable Detect
C4	Blue Video in	Blue Video in	Pb in
C5	Video Return	Video Return	Video Return



OUTPUT Signal Port: 15-pin Mini D-sub female connector



RGB output

Analog

1	Video output (red)
2	Video output (green/sync on green)
3	Video output (blue)
4	Not connected
5	Not connected
6	Earth (red)
7	Earth (green/sync on green)
8	Earth (blue)
9	Not connected
10	GND
11	GND
12	Not connected
13	Horizontal sync signal
14	Vertical sync signal
15	Not connected

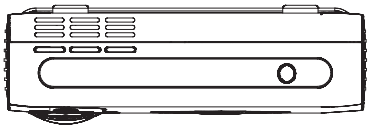
COMPONENT output

Analog

1	P_R (C_R)
2	Y
3	P_B (C_B)
4	Not connected
5	Not connected
6	Earth (P_R)
7	Earth (Y)
8	Earth (P_B)
9	Not connected
10	Not connected
11	Not connected
12	Not connected
13	Not connected
14	Not connected
15	Not connected

Dimensions

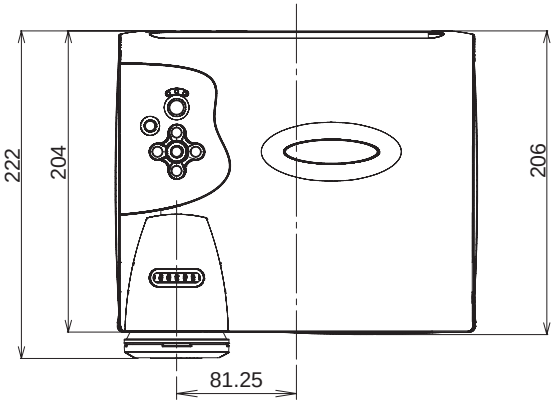
REAR VIEW



SIDE VIEW



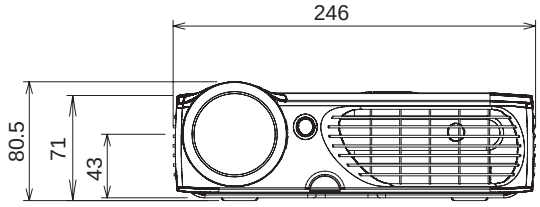
TOP VIEW



SIDE VIEW



FRONT VIEW



Units: mm

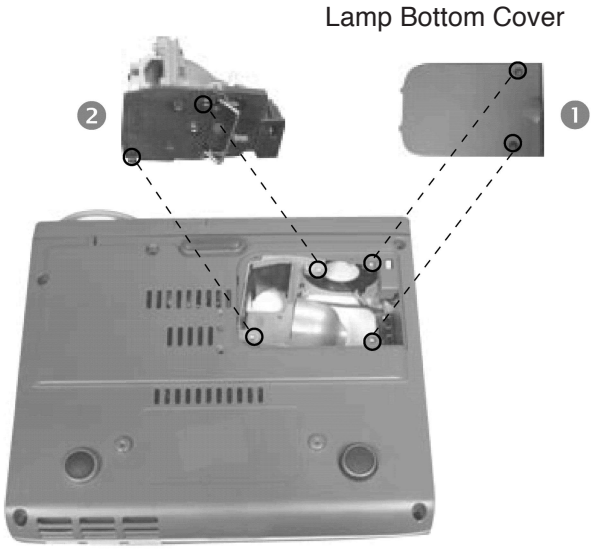
REMOVING OF MAJOR PARTS

Tools required

1. Philips screw driver (Size : 101, 102, 107)
2. Long Nose Nipper
3. Ball end hexagonal driver (5.0mm)

1. Disassemble Lamp Module

1-1. Loosen two screws of Lamp Bottom Cover to remove Lamp Bottom Cover.
1-2. Loosen two screws of Lamp Module to pull out Lamp Module.

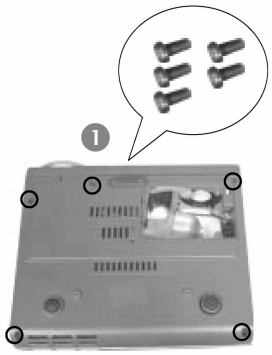


Cautions

1. Do not remove the lamp cover with the AC cord plugged in.
2. The fan starts to run as soon as the power is turned on or the lamp lights up when mounting the lamp cover, which may cause injury.
3. Be sure to unplug the AC cord before replacing the lamp.

2. Disassemble Top Cover and Keypad Board

2-1. Remove five screws of Bottom Cover.
2-2. Remove one screw beside Right Cover.
2-3. Remove one screw beside Left Cover.
2-4. Turn over the projector, then life up Top Cover from Left and Right side.
2-5. Unplug FFC from Main Board to remove Top Cover.



Bottom Cover



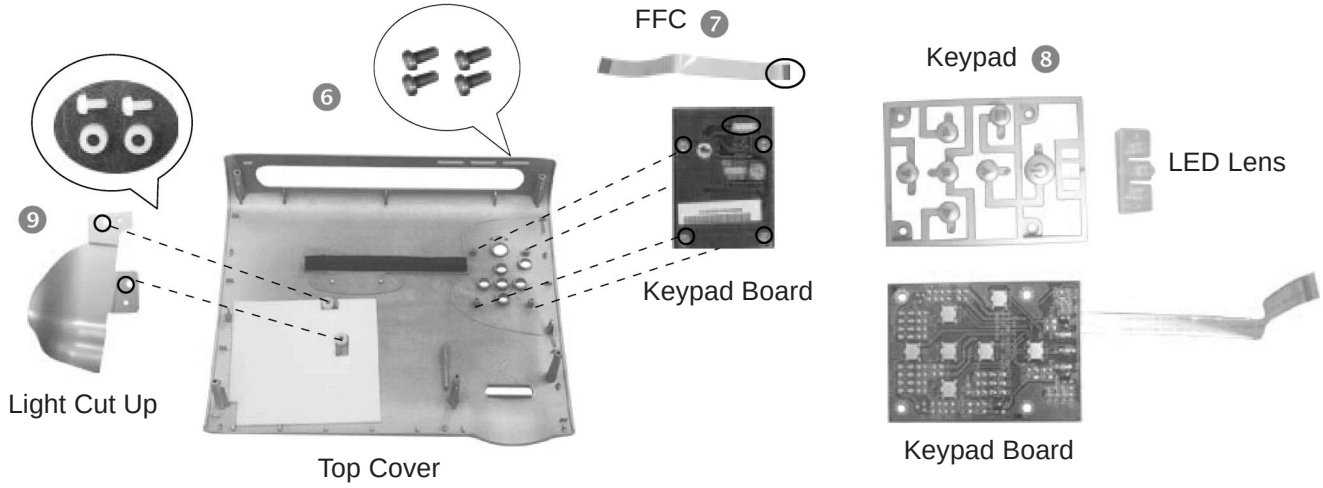
Right Cover



Left Cover

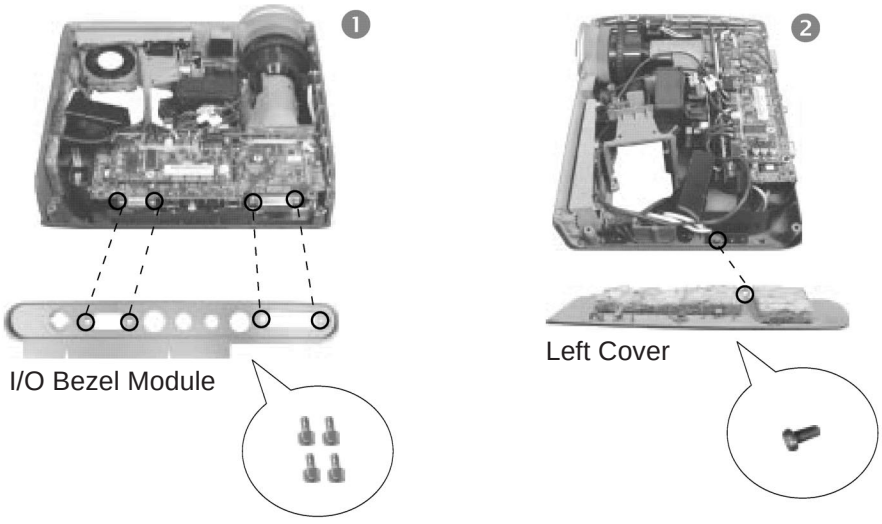


2-6. Unscrew four screws to remove Keypad Board and Keypad
2-7. Unplug FFC from Keypad Board.
2-8. Separate Keypad Board, Keypad and LED Lens.
2-9. Unscrew two screws to remove Light Cut Up.

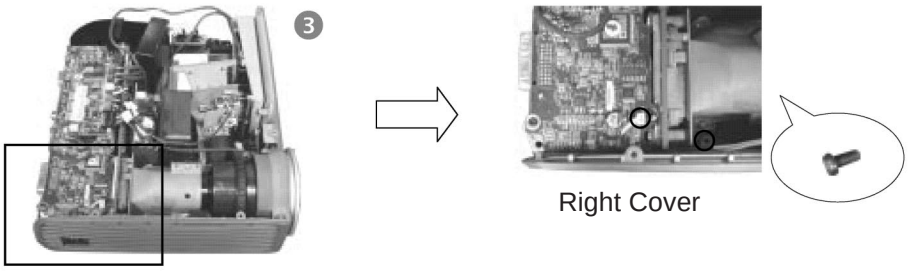


3. Disassemble Left Cover, Right Cover and I/O Bezel Module

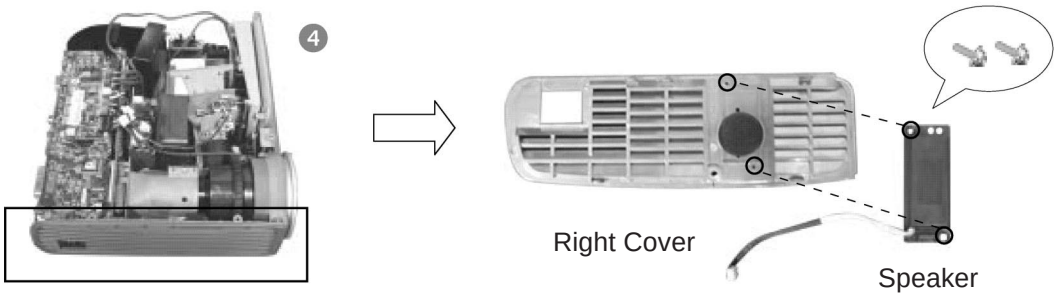
3-1. Remove four hex screws to remove I/O Bezel Module.
3-2. Unscrew one screw to remove Left Cover.



3-3. Unplug one wire from Main Board and unscrew one screw to remove Right Cover.

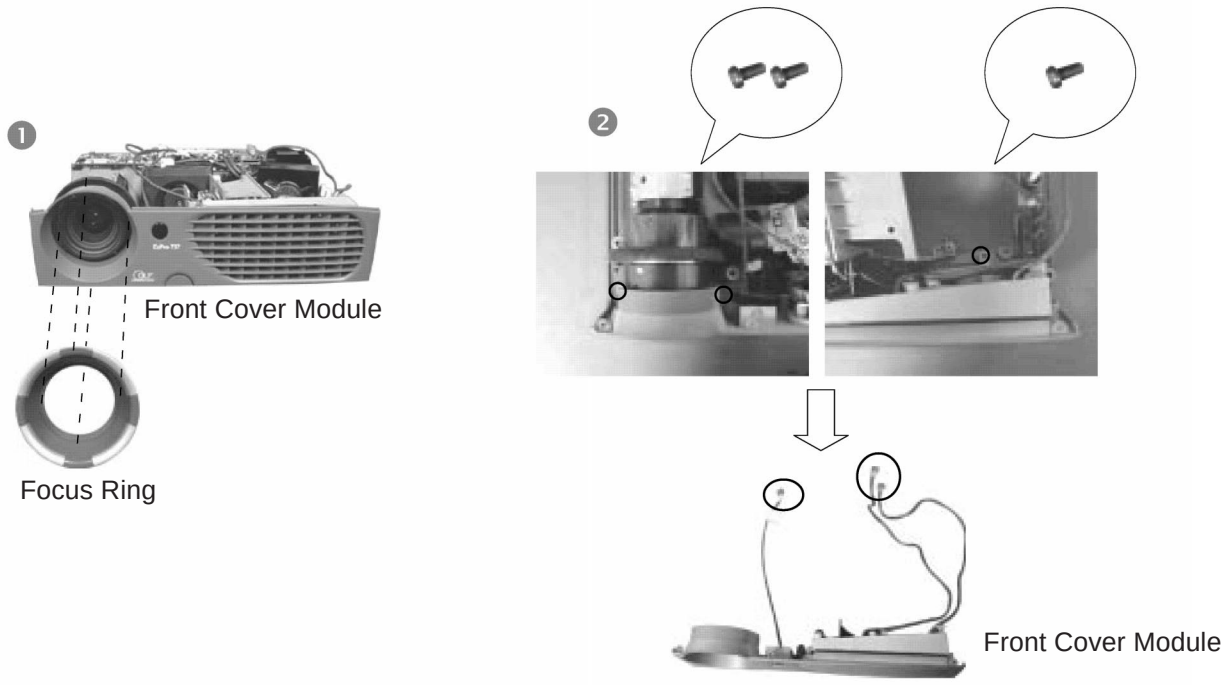


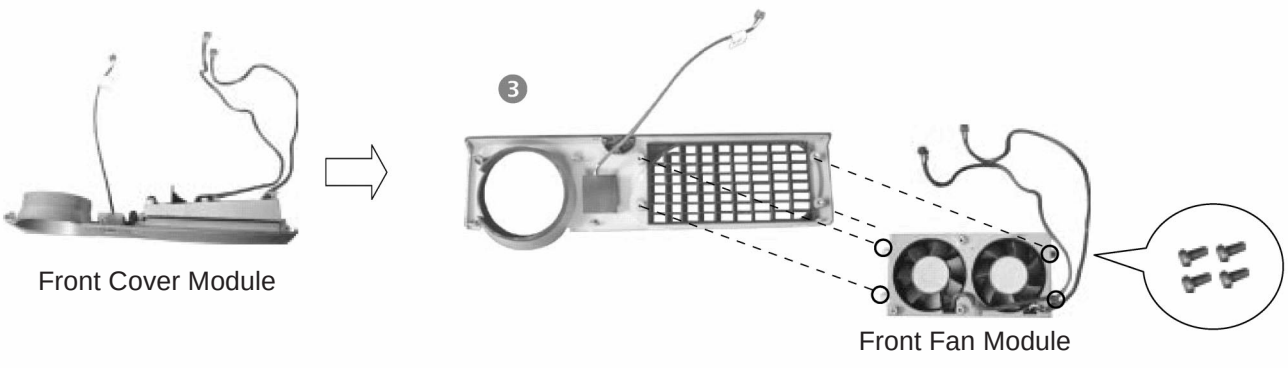
3-4. Remove two screws to take off speaker from Right Cover.



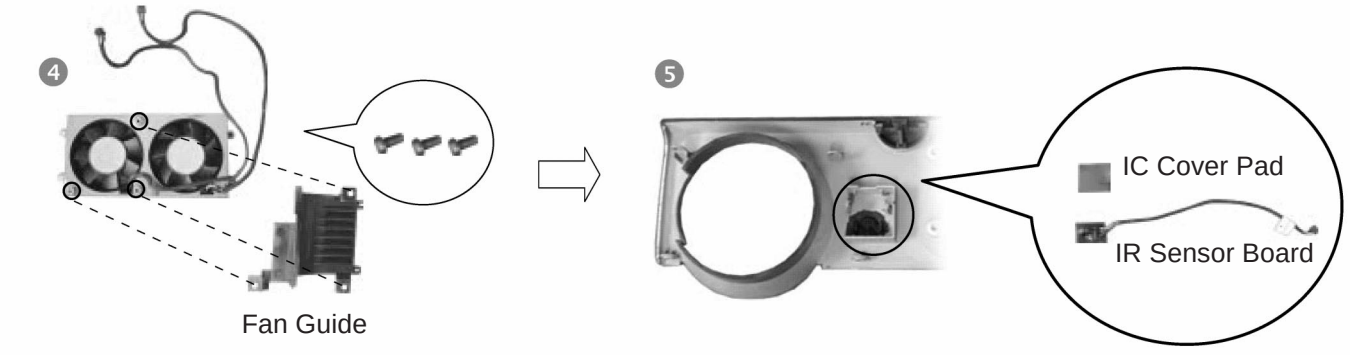
4. Disassemble Front Cover

4-1. Pull out Focus Ring from Front Cover Module.
4-2. Unscrew three screws from Front Cover Module and unplug three wires from Thermal Board. Take off Front Cover Module from Bottom Cover Module.
4-3. Unscrew four screws from Front Cover and take off it.



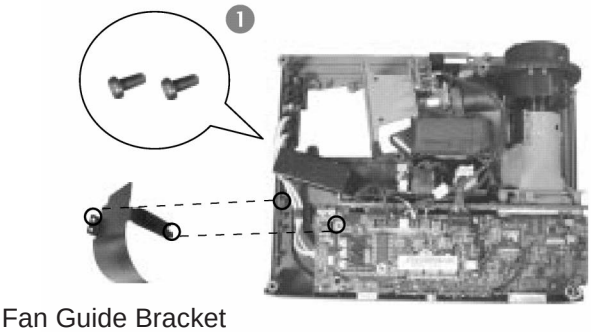


4-4. Unscrew three screws from Fan Guide to remove it.
4-5. Tear off IC Cover Pad, pull up IR Sensor Board from Front Cover Module.

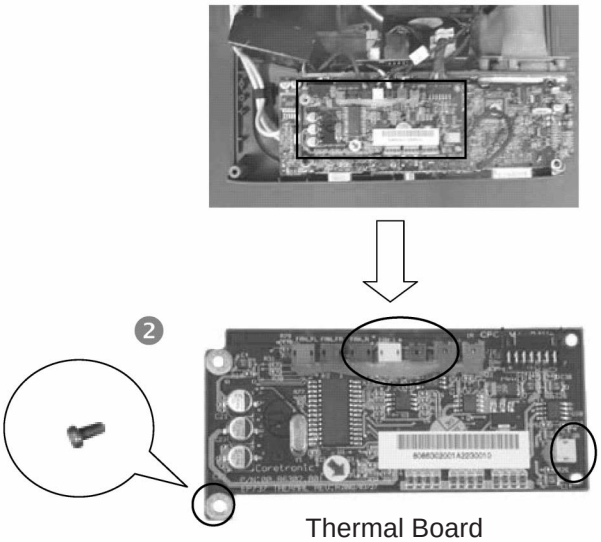


5. Disassemble Thermal Board and Main Board

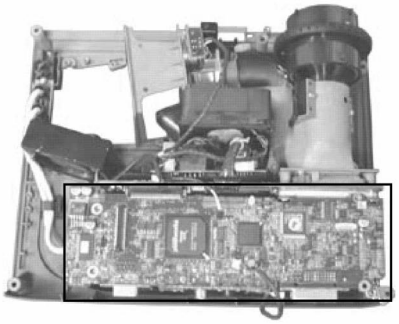
5-1. Unscrew two screws to remove Fan Guide Bracket.
5-2. Unscrew one screw and unplug five wires from Thermal Board to remove it.
5-3. Unscrew two hex screws and two screws from Main Board.
5-4. Pull up Main Board and Separate Main Board and Main Board Bottom Rubber.

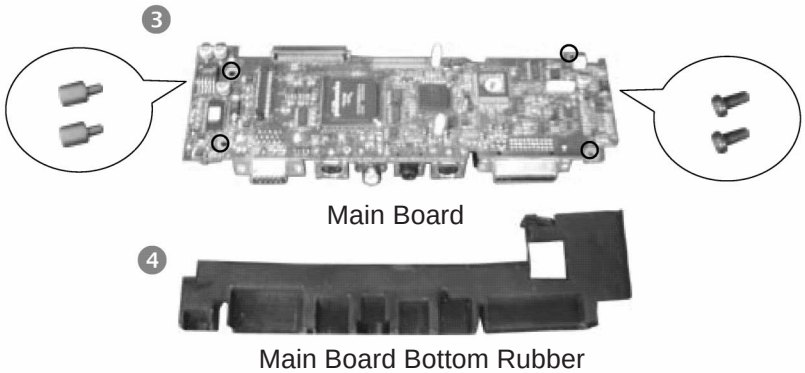


Fan Guide Bracket



Thermal Board



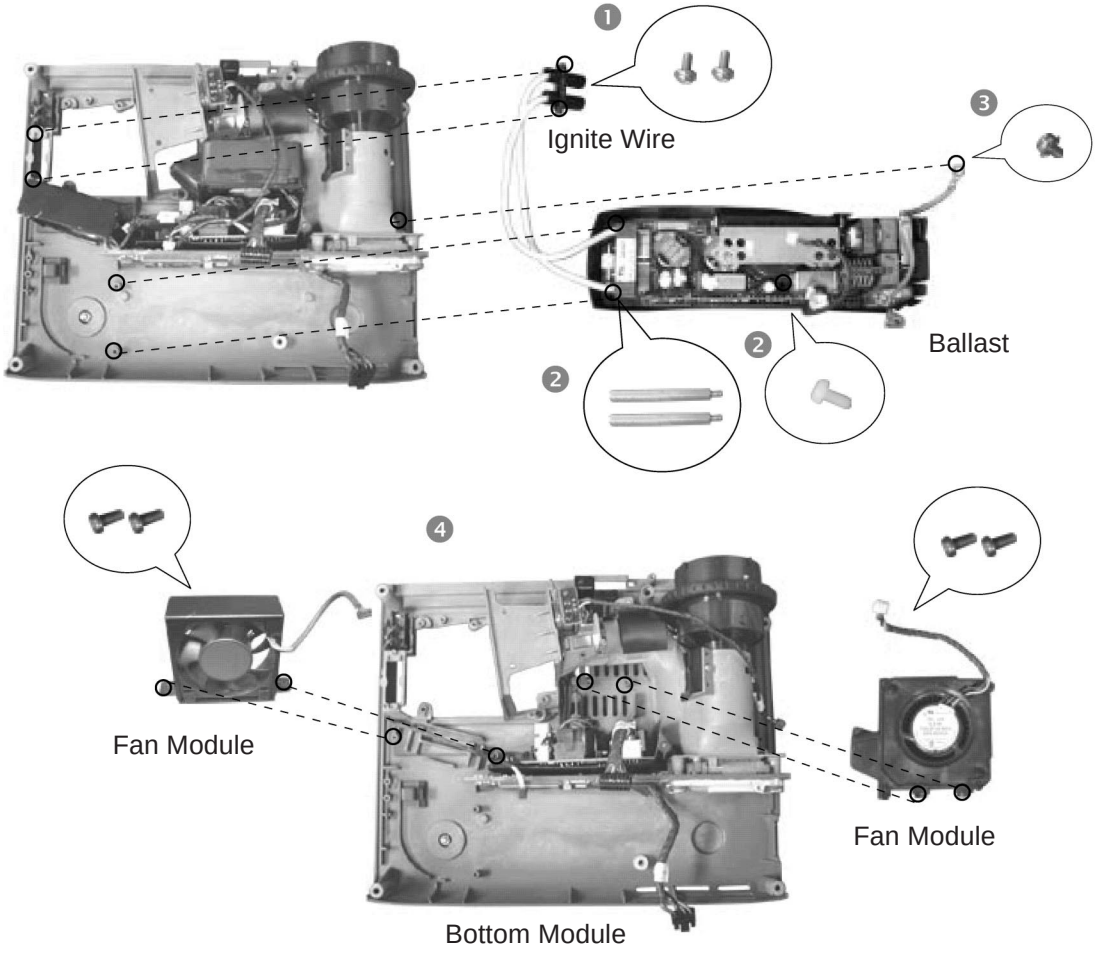


Main Board

Main Board Bottom Rubber

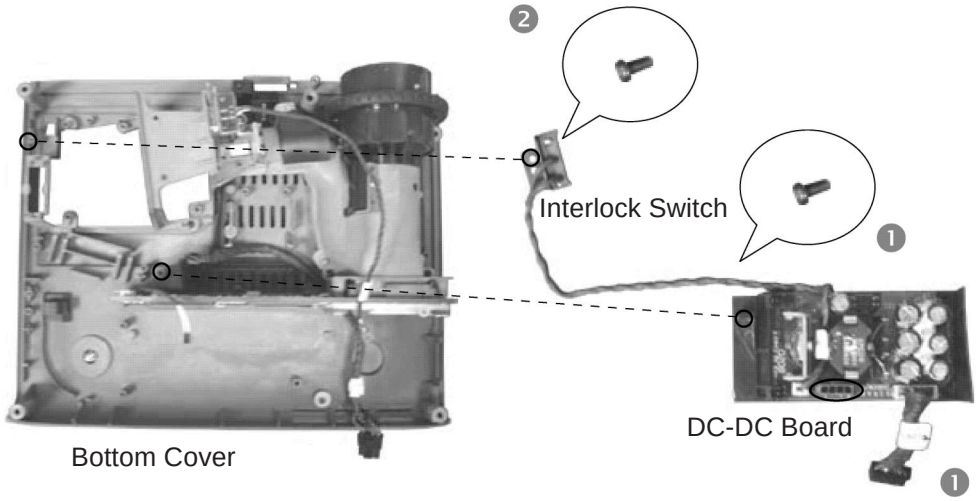
6. Disassemble Ballast and Fan Module

6-1. Unscrew two screws from Engine Module and pull out the Ignite Wire.
6-2. Unscrew two long hex screws and one plastic screw from Ballast Module.
6-3. Unscrew one screw from grounding then pull put the Ballast Module.
6-4. Unscrew four screws to remove two Fan Module from Bottom Module.



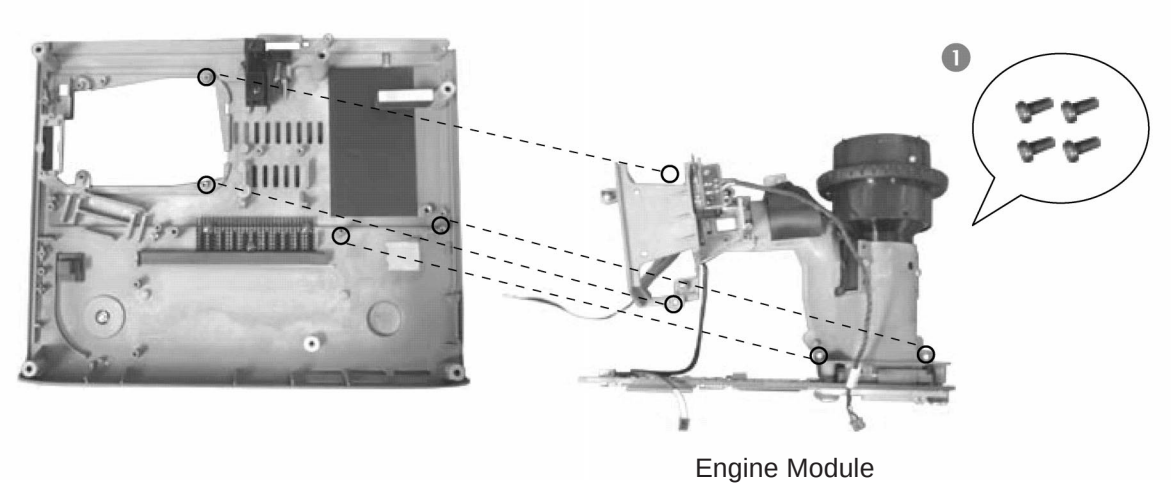
7. Disassemble DC-DC Board and Interlock Switch

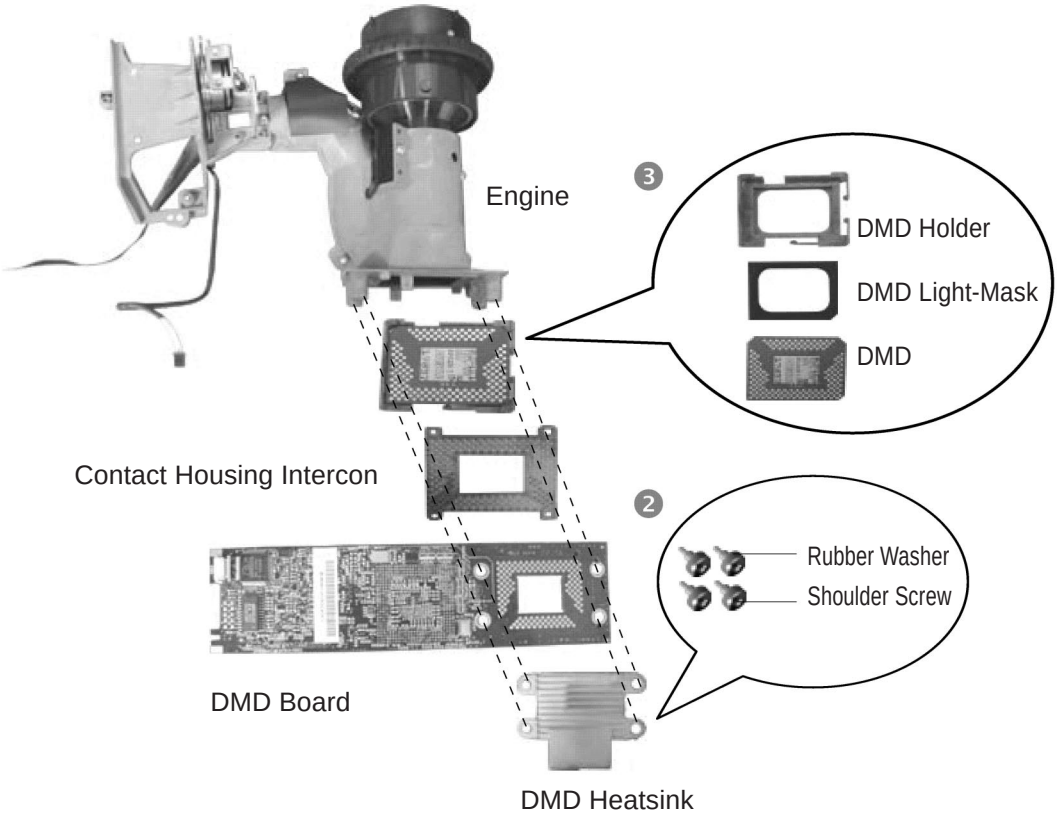
7-1. Unplug one wire from DC-DC Board.
Unscrew one screw to remove DC-DC Module from Bottom Cover.
7-2. Unscrew one screw to remove Interlock Switch from Bottom Cover.



8. Disassemble Engine, DMD and DMD Board

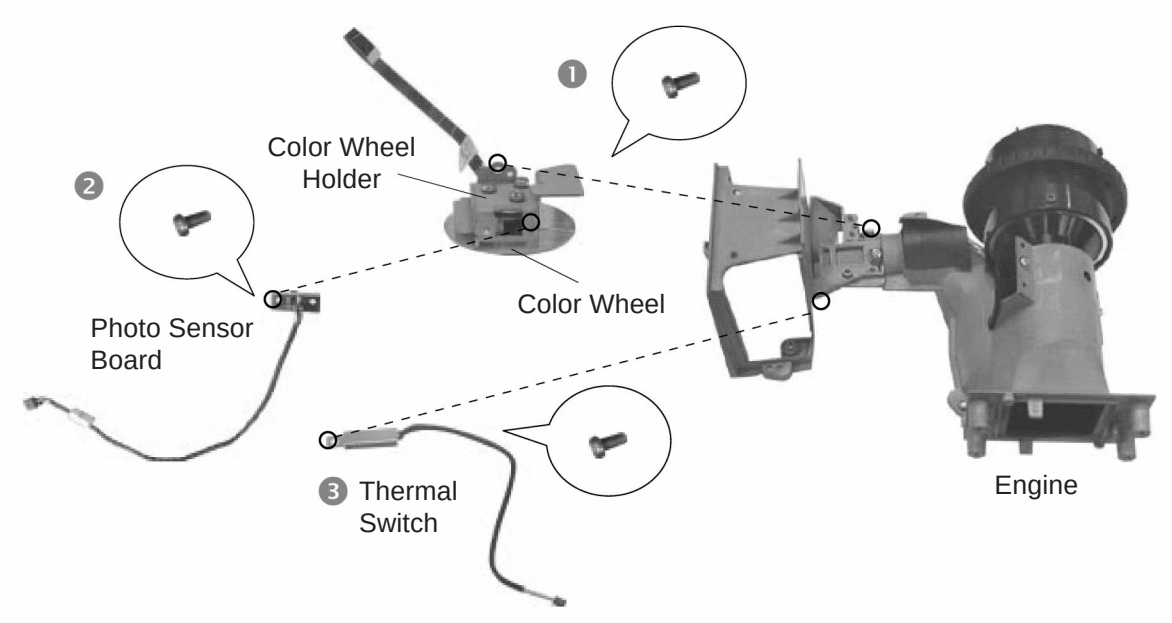
8-1. Unscrew four screws to remove Engine Module
8-2. Unscrew four shoulder screws and Rubber Washers to remove DMD Heatsink, DMD Board, and Contact Housing Intercon.
8-3. Remove DMD from DMD Holder.





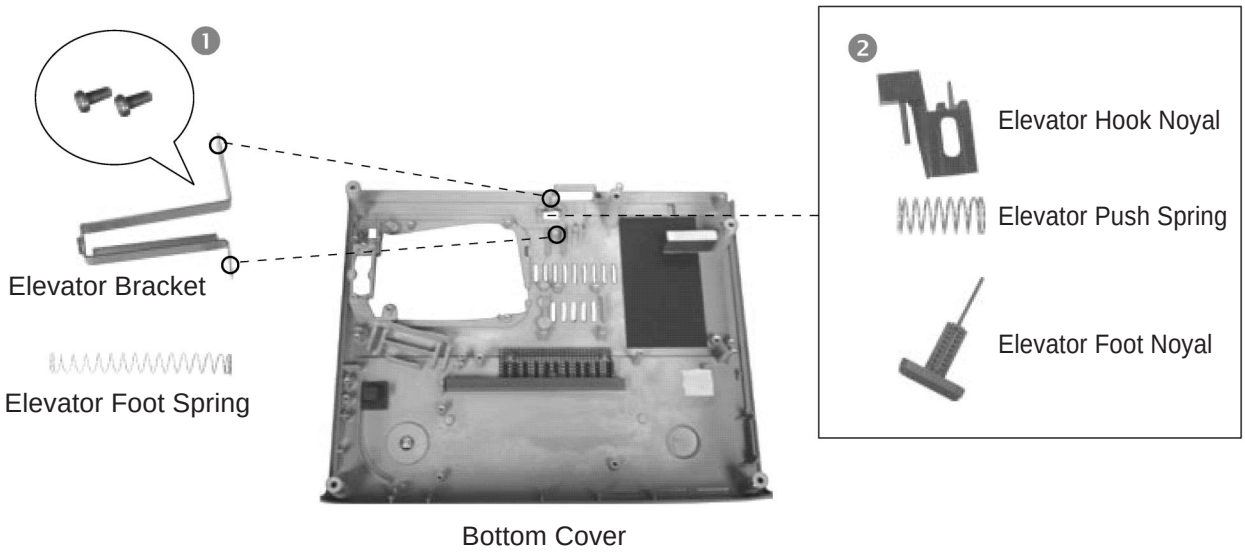
9. Disassemble Color Wheel, Photo Sensor Board and Thermal Switch

9-1. Unscrew one screw to remove Color Wheel and Photo Sensor Board from Engine.
9-2. Unscrew one screw to remove Photo Sensor Board from Color Wheel Holder.
9-3. Unscrew one screw to remove Thermal Switch from Engine.



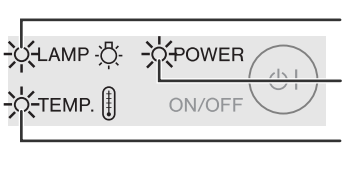
10. Disassemble Elevator Module

10-1. Unscrew two screws to remove Elevator Bracket and Elevator Foot Spring from Bottom Cover.
10-2. Pull out Elevator Hook Noyal rightward.
Then remove Elevator Hook Noyal, Elevator Push Spring and Elevator Foot Noyal.



RESETTING THE TOTAL LAMP TIMER

Maintenance Indicators



LAMP REPLACEMENT indicator

POWER indicator

TEMPERATURE WARNING indicator

- The warning lights on the projector indicate problems inside the projector.
- There are two warning lights: a TEMPERATURE WARNING indicator which warns that the projector is too hot, and a LAMP REPLACEMENT indicator which lets you know when to change the lamp.
- If a problem occurs, either the TEMPERATURE WARNING indicator or the LAMP REPLACEMENT indicator will illuminate red. After turning off the power, follow the procedures given below.

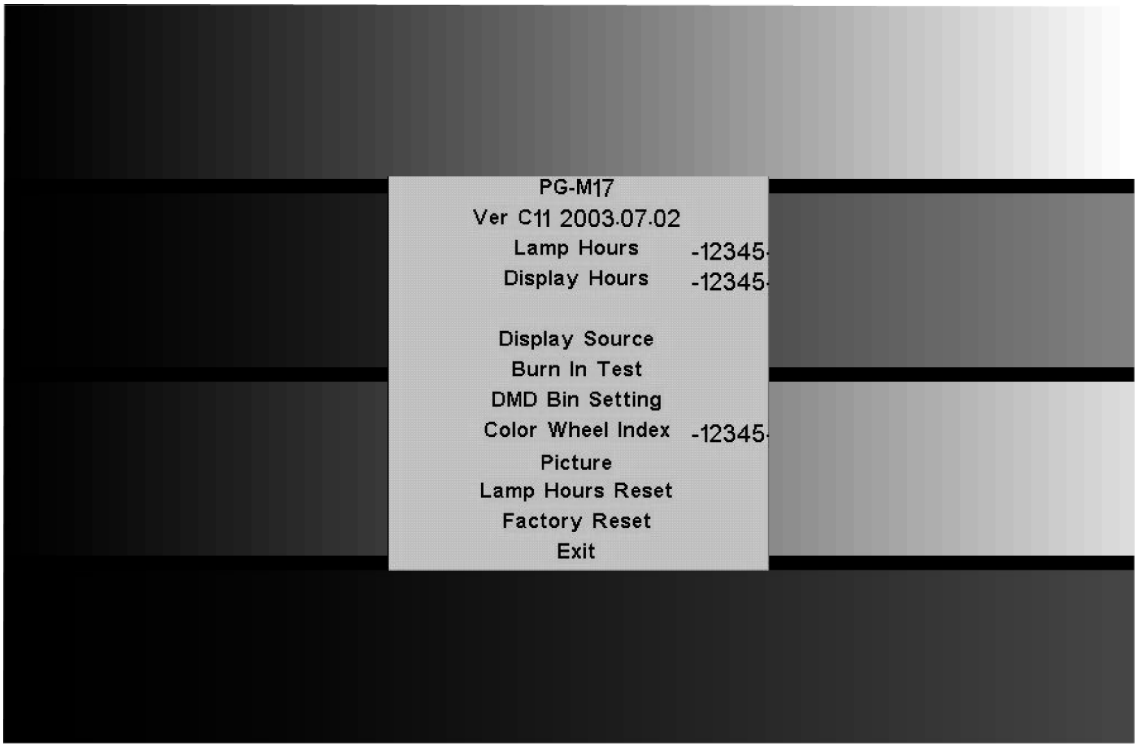
Maintenance Indicator	Condition	Problem	Possible Solution
TEMPERATURE WARNING indicator	The internal temperature is abnormally high.	• Blocked air intake.	• Relocate the projector to an area with proper ventilation.
		• Cooling fan breakdown. • Internal circuit failure.	• Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair.
	The indicator flashes in red.	• Cooling down.	• Wait until the indicator stops flashing and turns off.
LAMP REPLACEMENT indicator	The lamp does not illuminate.	• Burnt-out lamp. • Lamp circuit failure. • The lamp caga cover is not securely installed.	• Carefully replace the lamp. • Take the projector to your nearest Sharp Authorized Projector Dealer or Service Center for repair.
	The lamp requires replacement.	• Lamp has been used for over 1,400 hours.	

NOTE

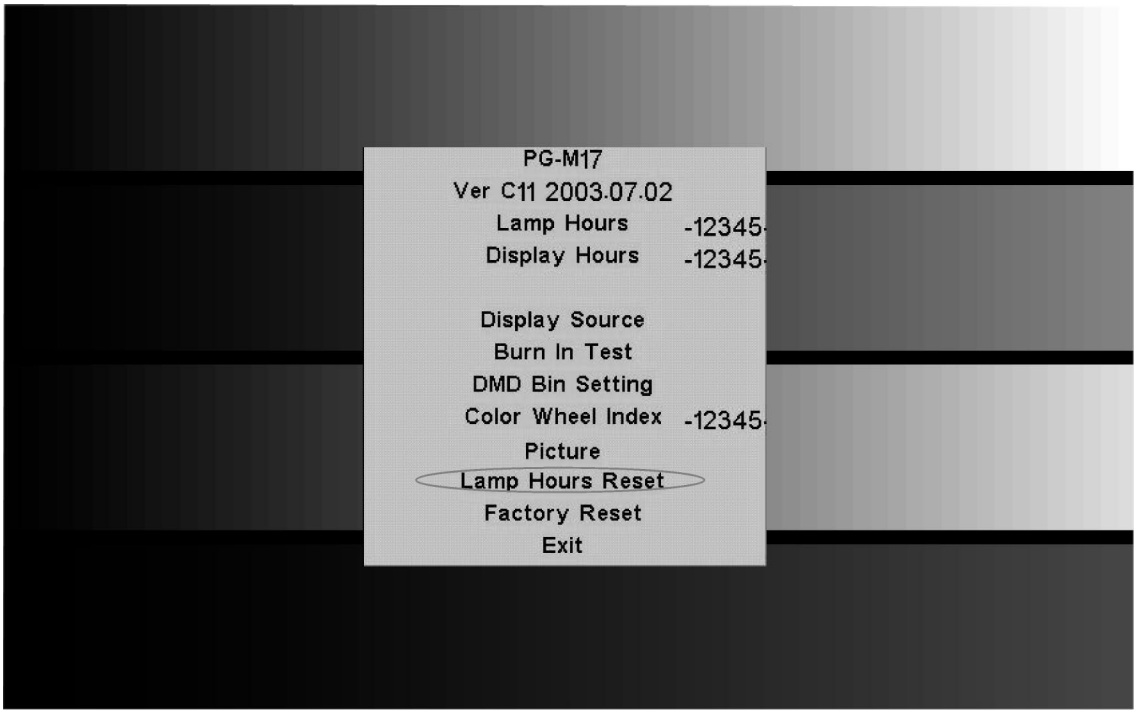
- If the TEMPERATURE WARNING indicator illuminates, follow the above possible solutions and then wait until the projector has cooled down completely before turning the power back on. (At least 5 minutes.)
- If the power is turned off and then turned on again, as during a brief rest, the LAMP REPLACEMENT indicator may be triggered, preventing the power from going on. Should this occur, take the power cord out of the wall outlet and put it back in again.

Resetting the lamp timer

1. Press "Up", "Up", "Left" to enter the Service Mode.



2. Press "Up" or "Down" button to choice Lamp Hours Reset, then press "Enter" button to reset the lamp hours.



3. After 2 seconds the Image will return to "Exit" function of Service Mode, then press "Enter" to exit Service Mode.



Lamp

The lamp in this projector operates for approximately 1,500 cumulative hours, depending on the usage environment. It is recommended that the lamp be replaced after 1,400 cumulative hours of use or when you notice a significant deterioration of the picture and color quality. The lamp usage time can be checked with the On-screen Display.

CAUTION

- Intense light hazard. Do not attempt to look into the aperture and lens while the projector is operating.

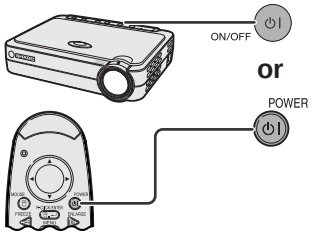
NOTE

- As the usage environment can vary significantly, the projector lamp may not operate for 1,500 hours.
- 1,500 hours above indicates average life span and should be used for reference only. This is different than the warranty period.
- For safety, the power will not be turned on from the fourth time when turning on the power without changing the lamp after use for 1,500 hours.

Condition	Problem	Possible Solution
The LAMP REPLACEMENT indicator illuminates red, and LAMP will appear in yellow in the lower-left corner of the picture.	• Lamp has been used for over 1,400 hours.	• Purchase a replacement lamp unit (lamp cage/module) of the current type BQC-PGM17X//1 from your nearest Sharp Authorized Projector Dealer or Service Center. • Replace the lamp. If you wish, you may have the lamp replaced at your nearest Sharp Authorized Projector Dealer or Service Center.
A significant deterioration of the picture and color quality occurs.		
The power will automatically turn off and the projector will enter standby mode.	• Lamp has been used for over 1,500 hours.	
LAMP will appear in red in the lower-left corner of the picture, and the power will turn off.		

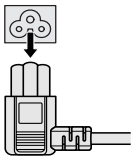
1 Turn off the power.

Press **ON/OFF** on the projector or **POWER** on the remote control. Wait until the cooling fan stops.



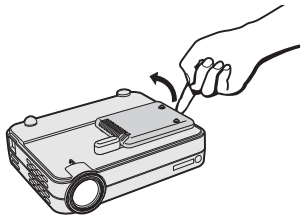
2 Disconnect the power cord.

Unplug the power cord from the AC socket.



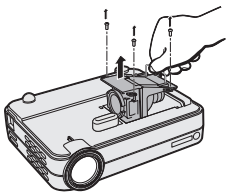
3 Remove the lamp cage cover.

Turn over the projector and loosen the user service screws that secure the lamp cage cover. Then lift open the cover in the direction of the arrow.



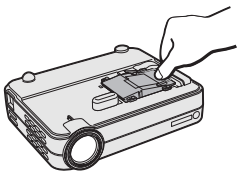
4 Remove the lamp cage.

Loosen the securing screws on the lamp cage. Hold the lamp cage by the handle and pull it towards you.



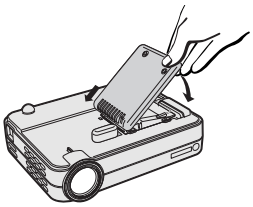
5 Insert the new lamp cage.

Press the lamp cage firmly into the lamp cage compartment. Fasten the securing screws.



6 Attach the lamp cage cover.

Slide the lamp cage cover in the direction of the arrow. Then tighten the user service screws.



FUNCTION TEST & ALIGNMENT PROCEDURE

1 Product

- PG-M17X Projector

2 Test Equipment

- IBM PC with XGA resolution (Color Video Signal & Pattern Generator)
- VCR with Multi-system(NTSC/PAL/SECAM)
- Chroma meter Minolta CL-100/T-10
- Hi-Pot

3 Test Condition

- Circumstance Brightness : Dark room less than 10 lux
- Inspection Distance : 2.0m
- Screen Size : 60 inches diagonal (wide)
- Before function test and alignment, each PG-M17X should be run-in and warmed-up for at least 5 minutes with following conditions.
  1.) In room temperature
  2.) With cycled display colors (R,G,B,White)
  3.) With cycled display modes

640 x 350 (H=31.5 KHz, V=70 Hz)	640 x 400 (H=31.5 KHz, V=70 Hz)
640 x 480 (H=37.5 KHz, V=75 Hz)	720 x 400 (H=31.5 KHz, V=70 Hz)
800 x 600 (H=53.7 KHz, V=85 Hz)	800 x 600 (H=37.9 KHz, V=60 Hz)
1024 x 768 (H=48.4 KHz, V=60 Hz)	1024 x 768 (H=68.7 KHz, V=85 Hz)

- Test Display Mode & Pattern (Refer to 4-4.1 & 4-4.2)
- Function Test and Alignment Procedure

4 Test Display Modes and Patterns

4.1 Compatible Modes

Analog :

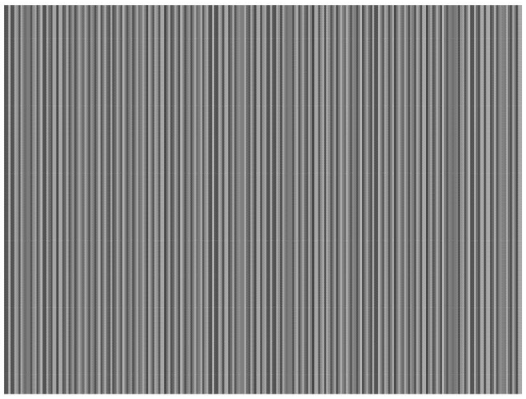
Resolution	V-Sync(Hz)	H-Sync(KHz)	Compatibility
640 x 350	70	31.5	VGA
640 x 350	85	37.9	VGA
640 x 400	70	31.5	VGA
640 x 400	85	37.9	VGA
640 x 480	60	31.5	VGA
640 x 480	72	37.9	VGA
640 x 480	75	37.5	VGA
640 x 480	85	43.3	VGA
720 x 400	70	31.5	VGA
720 x 400	85	37.9	VGA
800 x 600	56	35.2	SVGA
800 x 600	60	37.9	SVGA
800 x 600	72	48.1	SVGA
800 x 600	75	46.9	SVGA
800 x 600	85	53.7	SVGA
1024 x 768	43.4	35.5	XGA
1024 x 768	60	48.4	XGA
1024 x 768	70	56.5	XGA
1024 x 768	75	60.0	XGA
1024 x 768	85	68.7	XGA
1280 x 1024	60	63.98	SXGA
1280 x 1024	75	79.98	SXGA
640 x 480	66.66	34.98	MAC LC 13"
640 x 480	66.68	35	MAC II 13"
832 x 624	74.55	49.725	MAC 16"
1024 x 768	75	60.24	MAC 19"
1152 x 870	75.06	68.68	MAC
640 x 480	60	31.35	MAC G4
640 x 480	120	68.03	MAC G4
1024 x 768	120	97.09	MAC G4
640 x 480	117	60	i MAC DV
800 x 600	95	60	i MAC DV
1024 x 768	75	60	i MAC DV
1152 x 870	75	68.49	i MAC DV
1280 x 960	75	75	i MAC DV
1280 x 1024	85	90.9	i MAC DV

Digital :

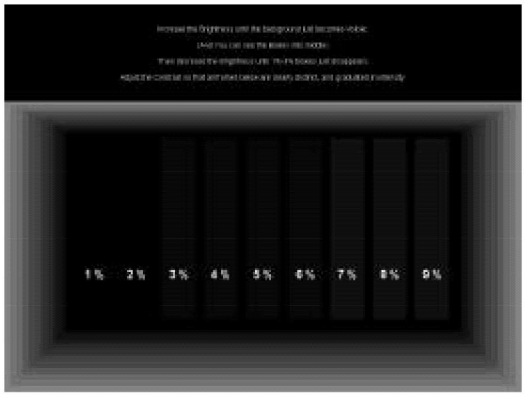
Resolution	V-Sync(Hz)	H-Sync(KHz)	Compatibility
640 x 350	70	31.5	VGA
640 x 350	85	37.9	VGA
640 x 400	70	31.5	VGA
640 x 400	85	37.9	VGA
640 x 480	60	31.5	VGA
640 x 480	72	37.9	VGA
640 x 480	75	37.5	VGA
640 x 480	85	43.3	VGA
720 x 400	70	31.5	VGA
720 x 400	85	37.9	VGA
800 x 600	56	35.2	SVGA
800 x 600	60	37.9	SVGA
800 x 600	72	48.1	SVGA
800 x 600	75	46.9	SVGA
800 x 600	85	53.7	SVGA
1024 x 768	60	48.4	XGA
1024 x 768	70	56.5	XGA
1024 x 768	75	60.0	XGA

4.2 Function Test Display Pattern

Item	Test Content	Pattern	Specification	Remark
1	Frequency & Tracking	Fine Line Moire	Eliminate visual wavy noise.	Figure 1
2	Contrast/Brightn-ess	Gray Scale	Gray levels should be distinguishable.	Figure 2
3	R, G, B and White Color Performance	R, G, B and White Color	Each R, G, B color should be normal.	Figure 3~6
4	Screen Uniformity & Flicker	Full White	Should be compliant with the like new spec.	Figure 6
5	Dead/Blemish Pixel	R, G, B, White, Dark, Blue 180, Gray 30	The numbers of dead/blemish pixels should be compliant with the like new spec.	Figure 3~9
6	Boundary	Boundary Frame	Horz. and Vert. position of video shuld be adjustable to be within the screen frame.	Figure 10



Fine Line Morie Pattern (Figure 1)



Contrast & Brightness (Figure 2)



R. Color Pattern (Figure 3)



G. Color Pattern (Figure 4)



B. Color Pattern (Figure 5)

Full White Pattern (Figure 6)



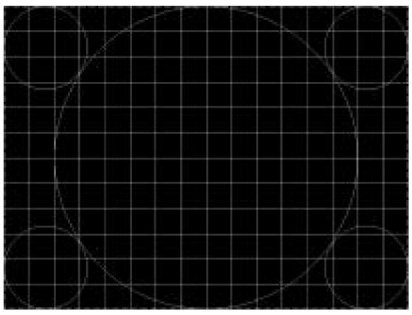
Dark Pattern (Figure 7)



Gary 30 Pattern (Figure 8)



Blue 180 Pattern (Figure 9)



Boundary Frame (Figure 10)

5 Inspection Procedure

RESET :

Please press "Menu" button on the projector panel to enter "Image-II" Function then choose "Reset Function", press "Left Button" to choose "YES" and to see if it works. This action will allow you to erase all end-user's settings and restore the original factory setting.

Hi-Pot and Grounding Test :

- Hi-Pot Specification : 1.5kVAC, 10mA, 2 seconds.
- Grounding Specification : 12VDC, 25A, 0.1 ohm.

Clock and Clock Phase :

Test Signal : 1024 x 768 @ 75Hz
Test Pattern : Line Moire Pattern

- Check and see if image sharpness and focus is well performed.
- If not, readjust by following steps.
  - Enter "Image-II" menu and select "Frequency" Function to adjust the total pixel number of pixel clock in one line period.
  - Then select "Tracking" Function and use right or left arrow key to adjust the value to minimize video flicker.

R, G, B and White Colors Contrast :

Test Signal : 1024 x 768 @ 75Hz
Test Pattern : 64 or 16 R, G, B and White colors Intensities Pattern

- Please check and see if each colors is normal and distinguishable.
- If not, please return the unit to repair area.

Screen Uniformity and Flicker :

Test Signal : 1024 x 768 @ 75Hz
Test Pattern : Full White Pattern

- Please check and see if it's in normal condition.
- If not, please return the unit to repair area.

Dead Pixel/Blemish Pixel :

Test Signal : 1024 x 768 @ 75Hz
Test Pattern : Gray 30, Blue 180, White, Dark, Red, Green and Blue Pattern

- Please check and see if there are dead pixels on DMD chip.
- The total numbers and distance of dead pixels should be complaint with like new specification.

Check for Secondary Display Modes

Test signal :
1.) 640 x 350 @ 70.09 / 85.08Hz
2.) 640 x 480 @ 72.81 / 75.00 / 85.01Hz
3.) 720 x 400 @ 70.08 / 85.04Hz
4.) 800 x 600 @ 56.25 / 60.32 / 72.19 / 75.00 / 85.06Hz
5.) 832 x 624 @ 74.55Hz
6.) 1024 x 768 @ 43.48 / 60.00 / 70.00 / 75.03 / 85.00Hz

Normally when the primary mode 1024 x 768 @ 85Hz is well adjusted and complaint with the like new specification, then the secondary display modes will be great possibility to be complaint with the specification. But we still have to check with general test pattern to make sure every secondary modes is complaint with like new specification.

Factory Reset :

After final QC step, we have to erase all saved change again and restore the factory defaults. Please select and enter "Factory Reset" Function to see if it is workable. This action will allow you erase all end-user's settings and restore the original factory setting.

FIRMWARE UPGRADING PROCEDURE

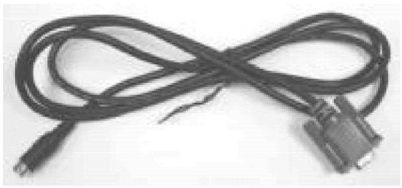
1 Equipment Needed

* Software :

- Bootcode.axe
- Bootcode.hex
- Configdata.hex
- Gui.hex
- RomCode.axe
- Flasher.hex
- pwSDK.inf
- ChkSum.txt
- Flasher.hex
- DISPSUM.exe
- FlashUpgrader MFC Application

* Hardware :

- Fixture
  1. Cable RS-232(Blue) To MINI DIN 3PIN 1800mm. (P/N : 42.86301.001, Rev.A)



- PC
- PG-M17X Projector

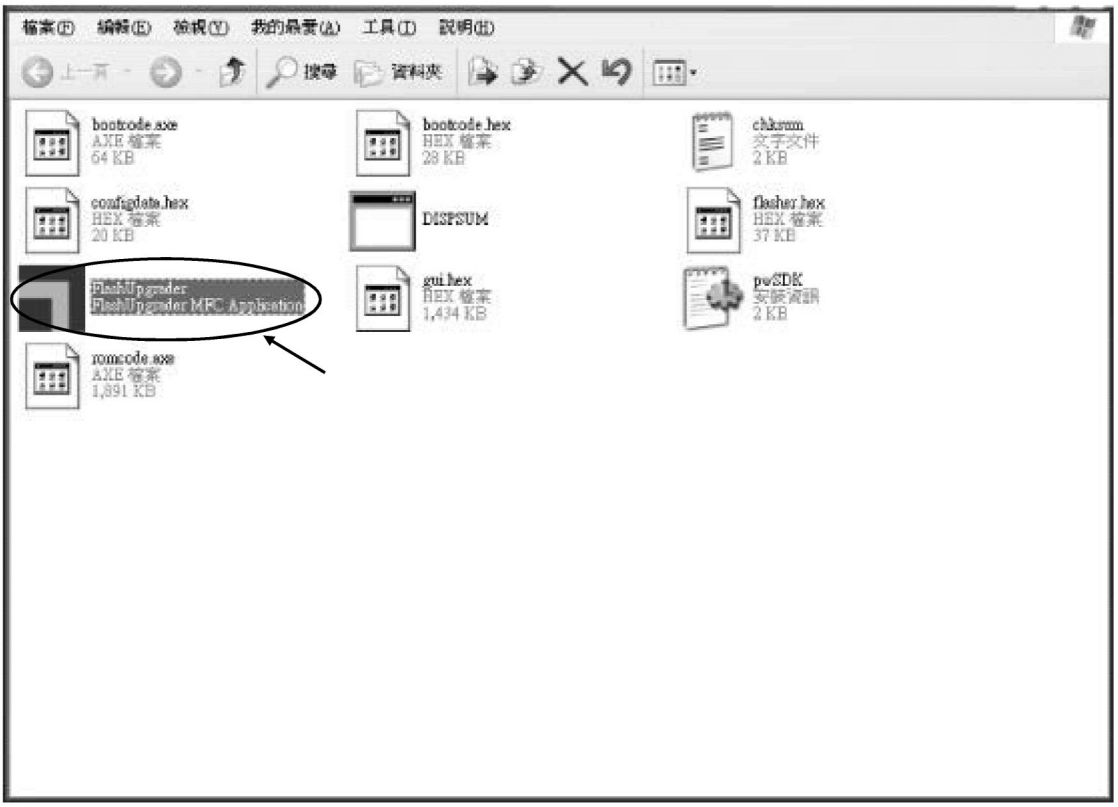
2 Setup Procedure

1. Connecto RS232 to mini din 3Pin cable to COM1 of PC and PG-M17X.

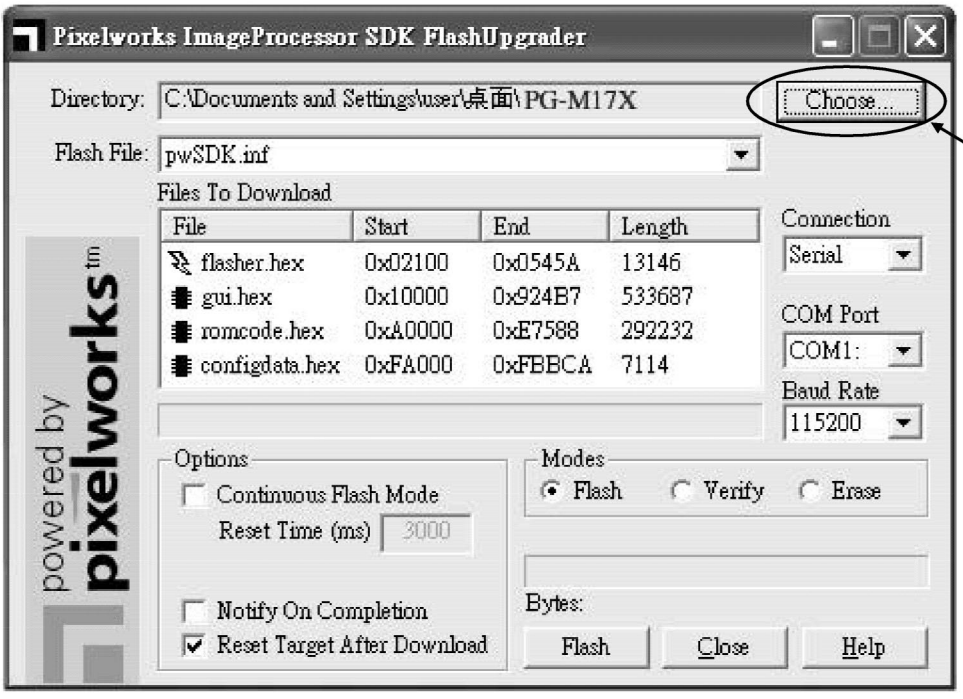


3 Upgrading Procedure

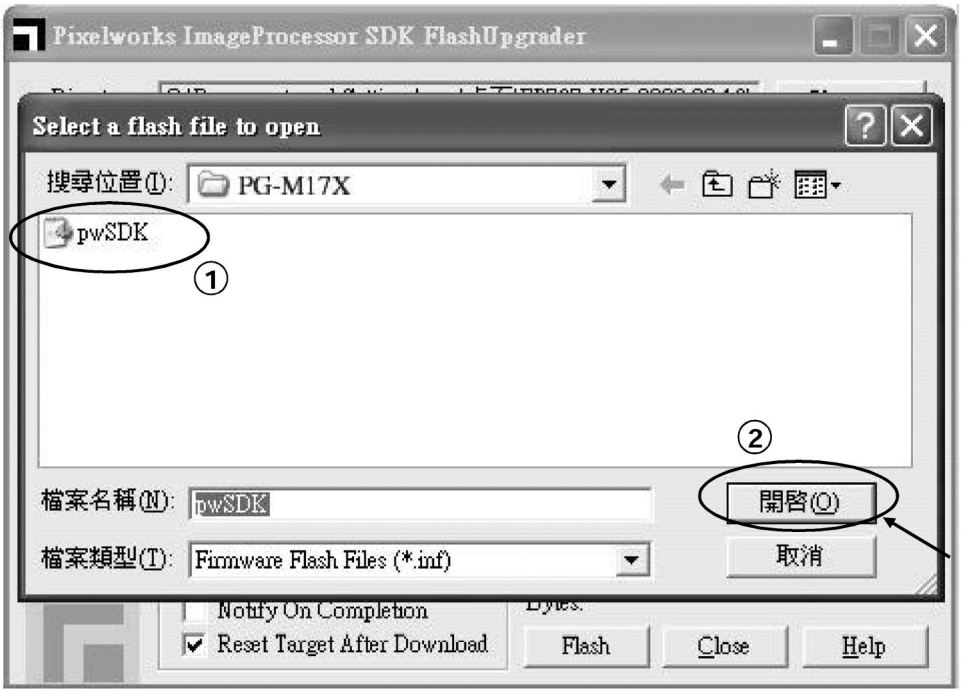
1. Execute "FlashUpgrader MFC Application".



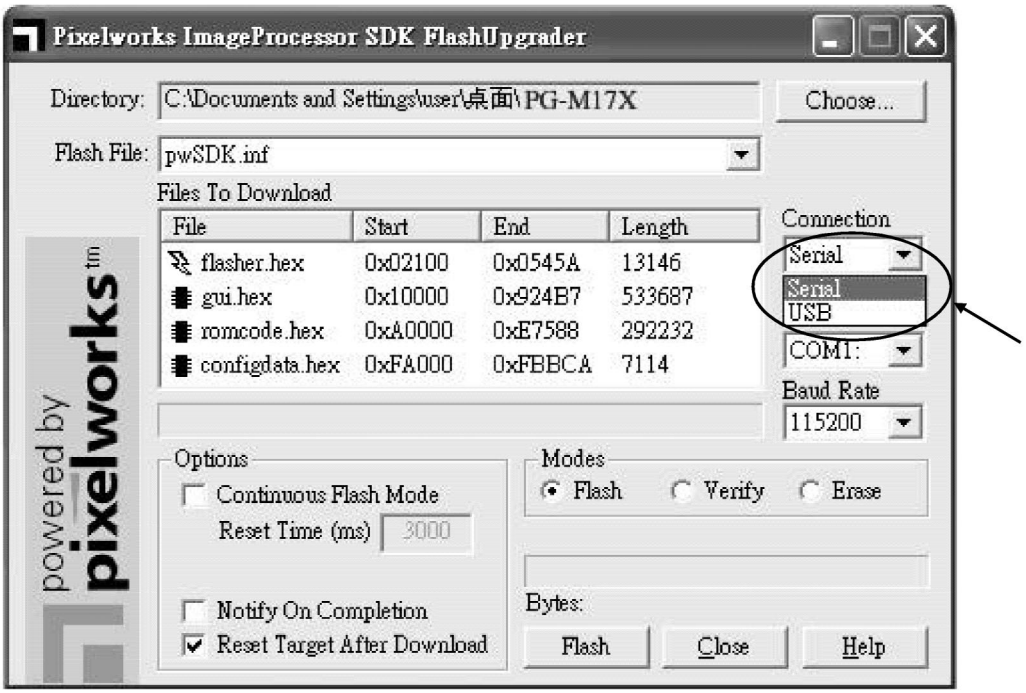
2. Click "Choose" button.



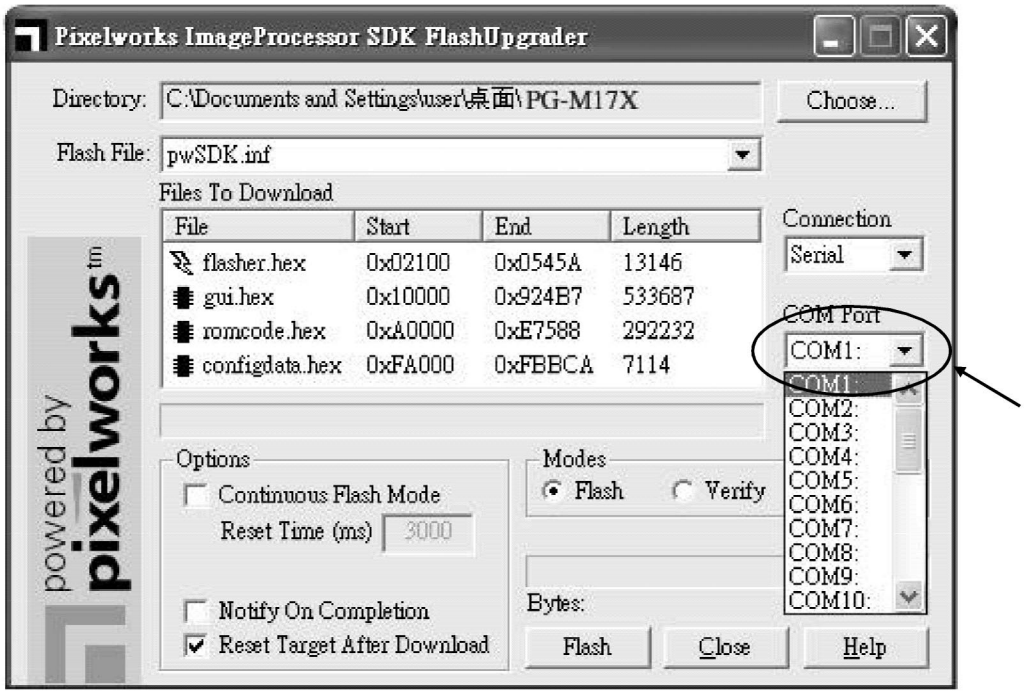
3. Search <pwSDK.inf> file from PG-M17X F/W folder, then click "Open" button.



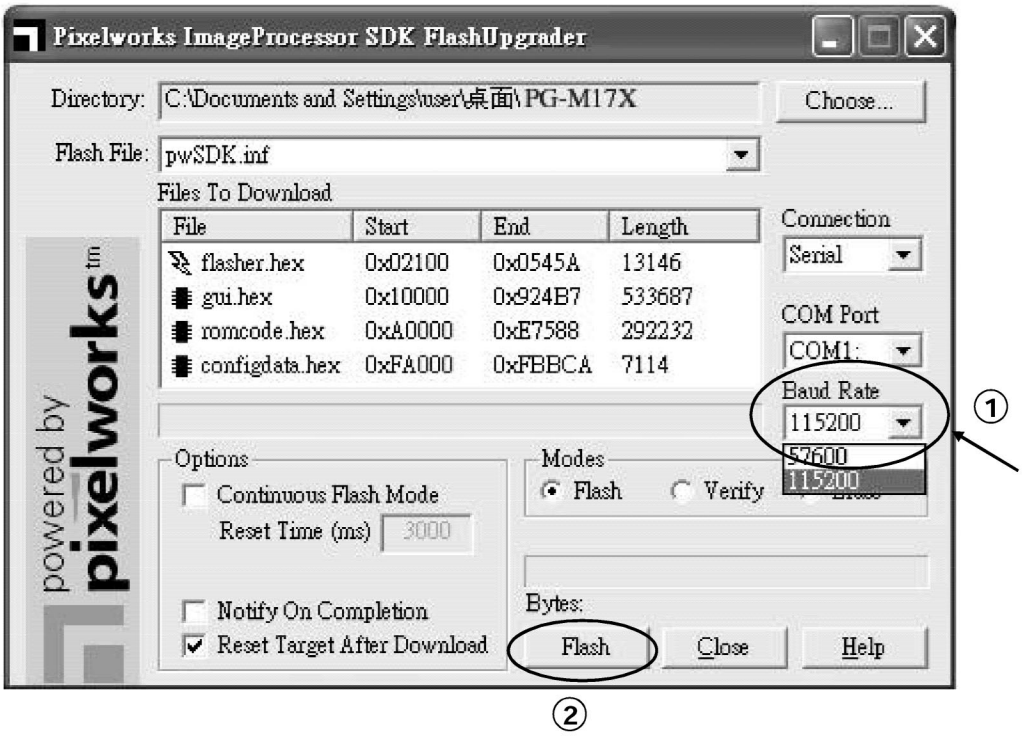
4. Select "Serial" Port.



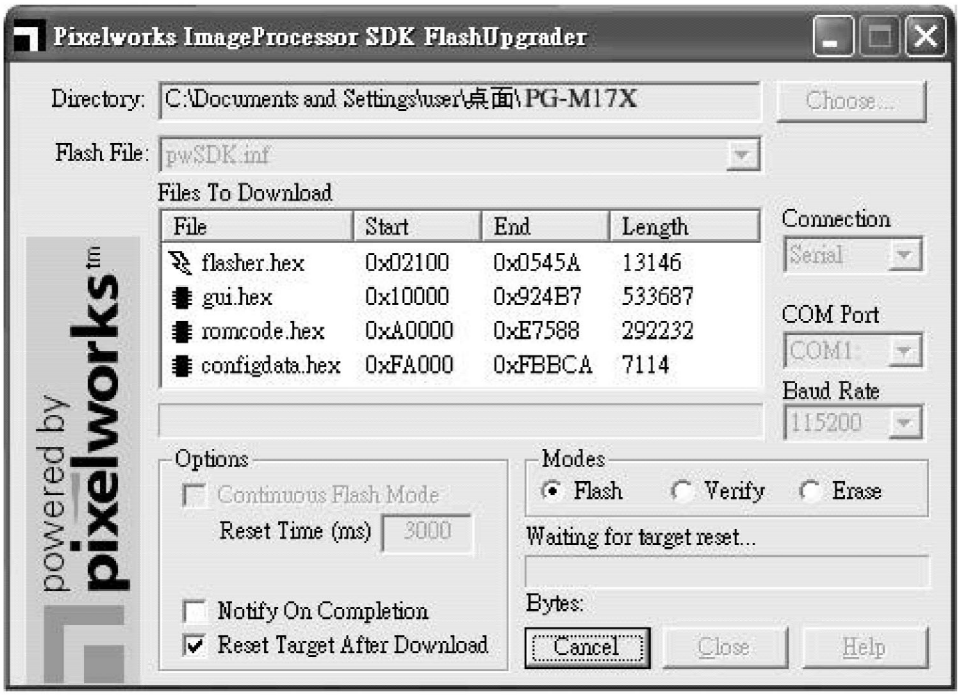
5. Select "COM1" Port.



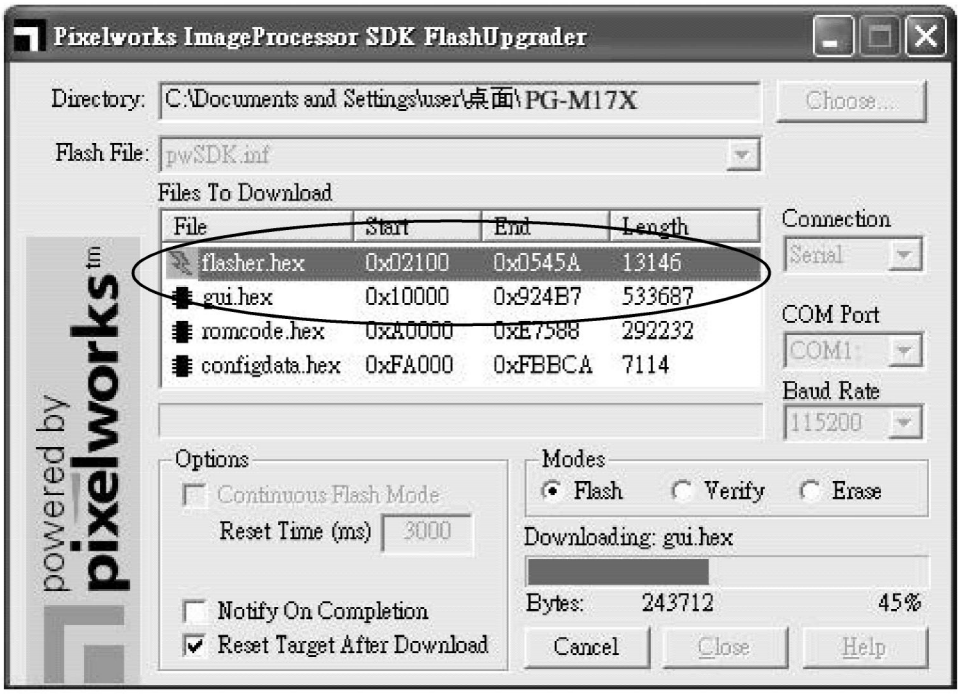
6. Select Baud Rate to be "115200", then click "Flash" button.



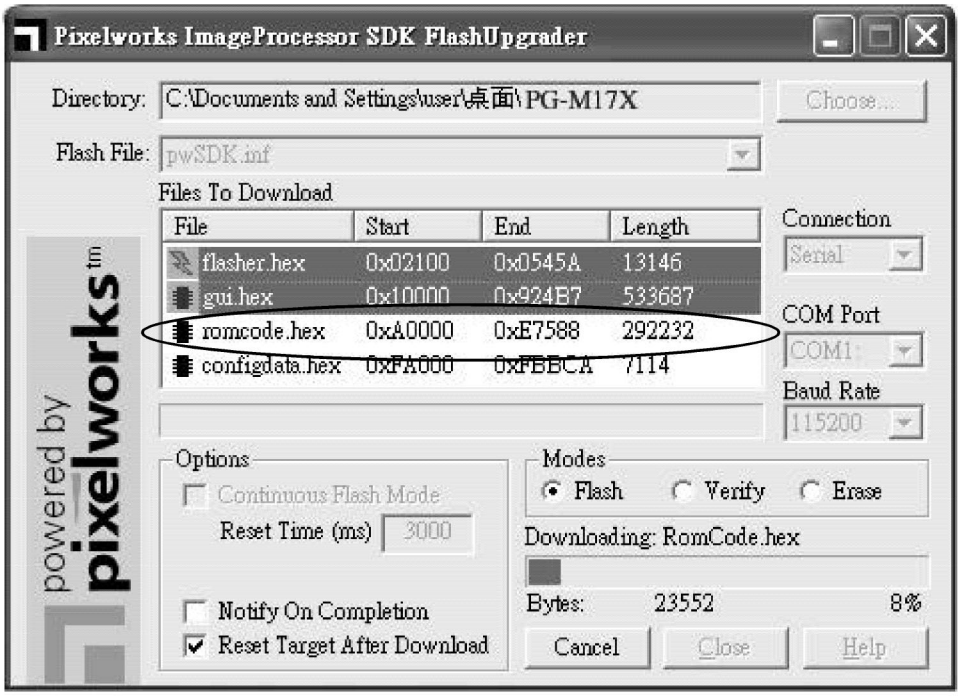
7. Plug in the Power Cord to PG-M17X, then press and hold on "Standby" key on PG-M17X keypad.
   Note : The Firmware upgrade program will be stop if you havn't hold the standby button.



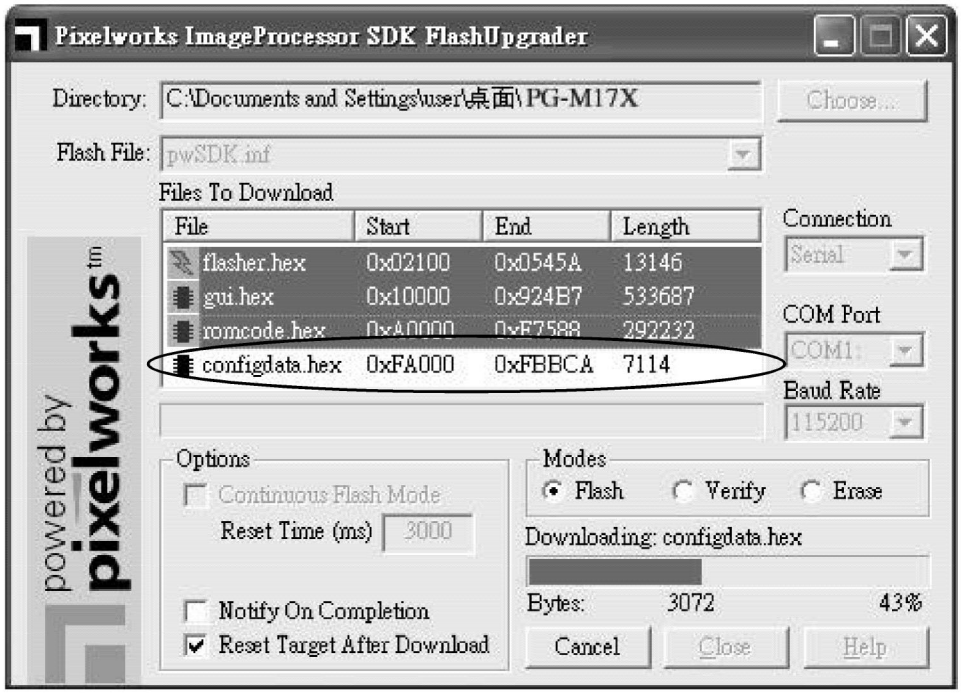
8. Downloading <Flasher.hex> and <Gui.hex> files.



9. Keep on downloading <RomCode.hex> file.



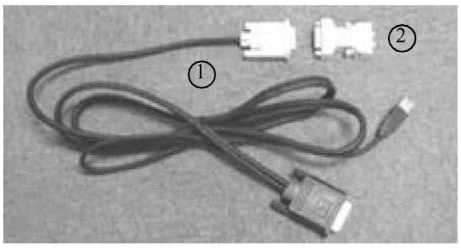
10. After <Configdata.hex> file is downloaded, await starting up PG-M17X (about 2-3 seconds), then finish the upgrading procedure



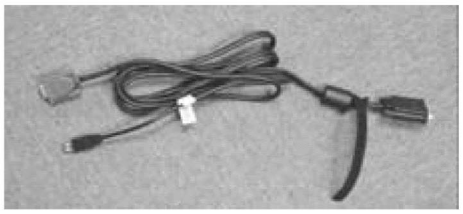
DDC KEY-IN PROCEDURE

1 Equipment Needed

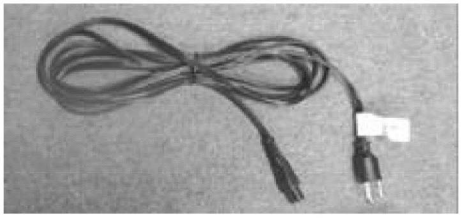
* Fixture
* PC set
* Power Cord
* Power Adapter
* DVI TO M1 Cable
* VGA TO M1 Cable (P/N : 42.85804.001)
* DFP TO DVI Adapter
* RS232 cable (P/N : 42.83618.001)
* PG-M17X Projector
* EDID Driver : depends on the model



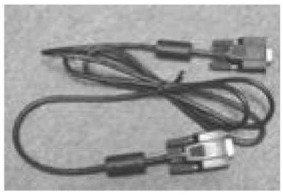
1). DVI TO M1 Cable (For Digital)
2). DFP TO DVI Adapter



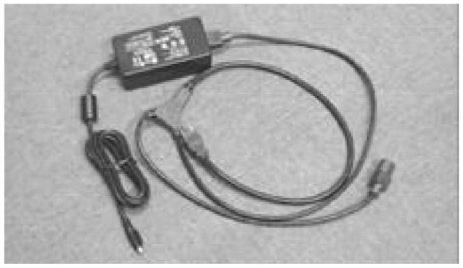
VGA TO M1 Cable (For Analog)



Power Cable



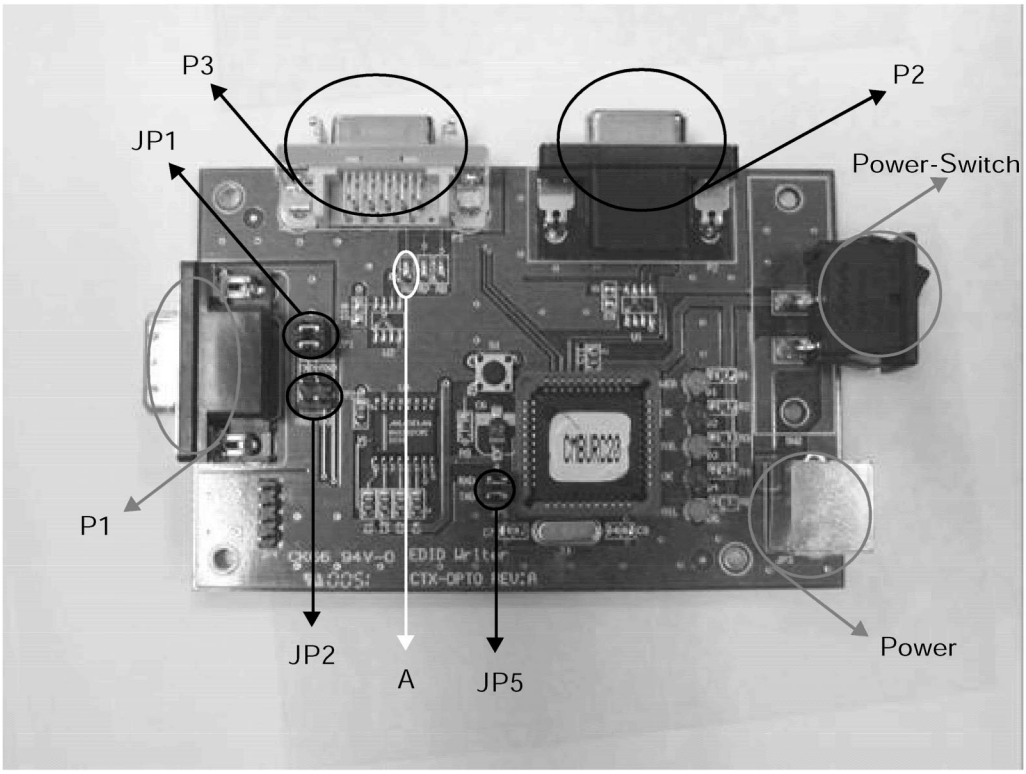
RS232 Cable



Power Adapter

2 Setup Procedure

1. Plug in the power of the fixture
2. JP1 and JP5 on the fixture are close, and JP2 is open. (Figure 1)
3. Turn on the fixture.
4. Confirm "A" is short circuit.

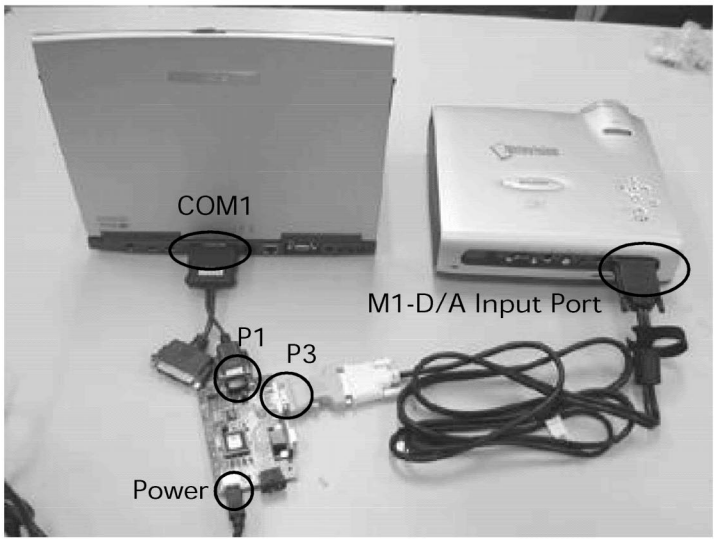


(Figure 1 : Fixture)

3 DDC Key-in Procedure

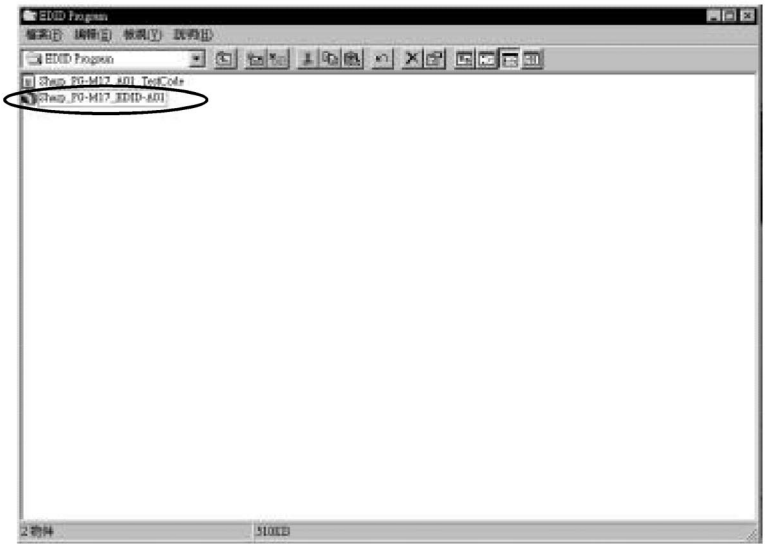
3.1 Digital :

1. Connect P1 of the fixture with COM1 port of PC by RS232 cable.
2. Connect P3 of the fixture with M1-D/A Input Port of PG-M17X by DVI TO M1 cable.
3. Connect Power of the fixture with power source by Power Adapter.

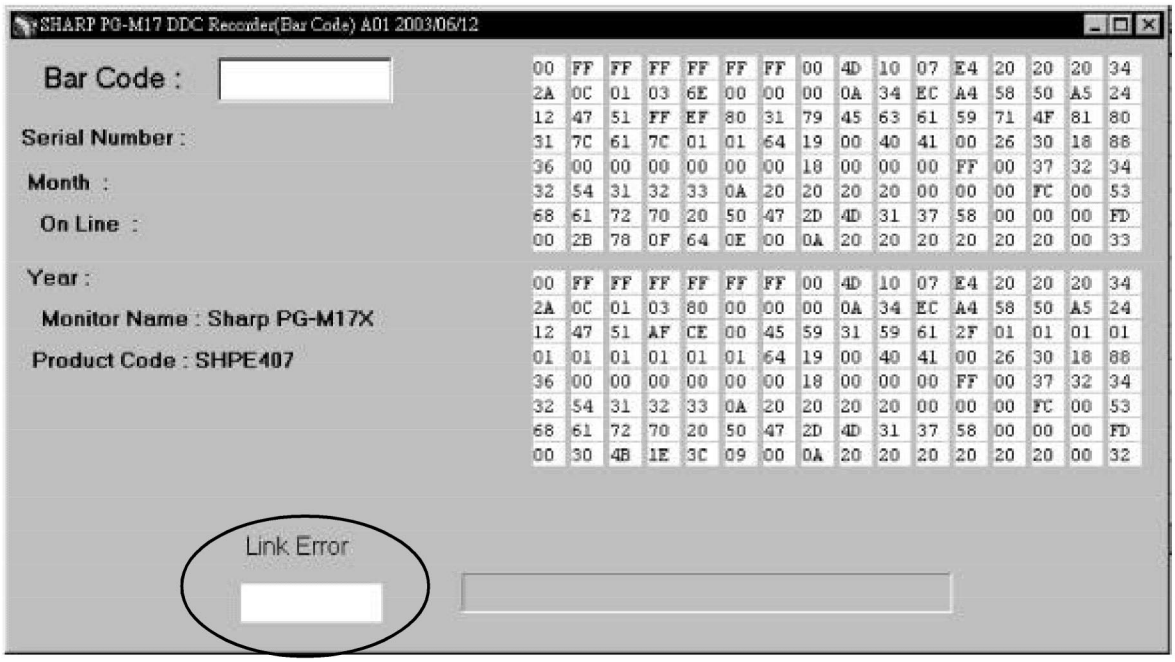


(Figure 1 : Finish Setup)

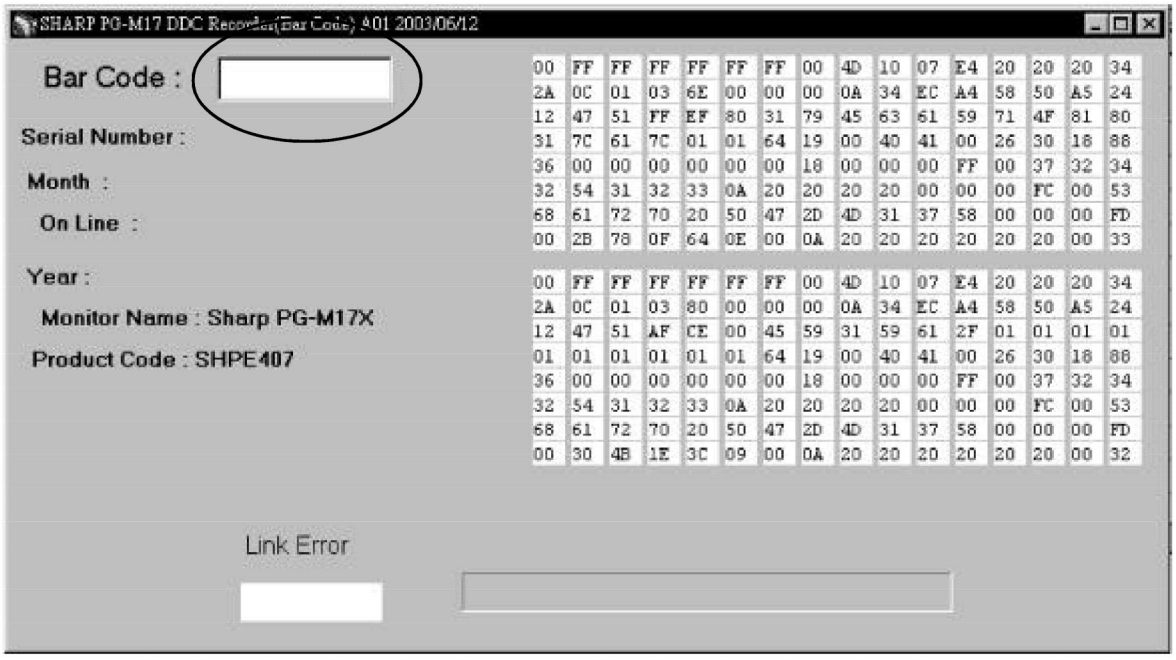
1. Turn on PG-M17X and run EDID program in the computer.



2. Make sure link is OK or not.



3. Key-in S/N into the blank beside Bar Code, then press "Enter" key on keyboard begin programming.



4 . After finishing the above action, "PASS" massage will appear on the Screen.

OPTICAL ADJUSTMENT AND MEASURING

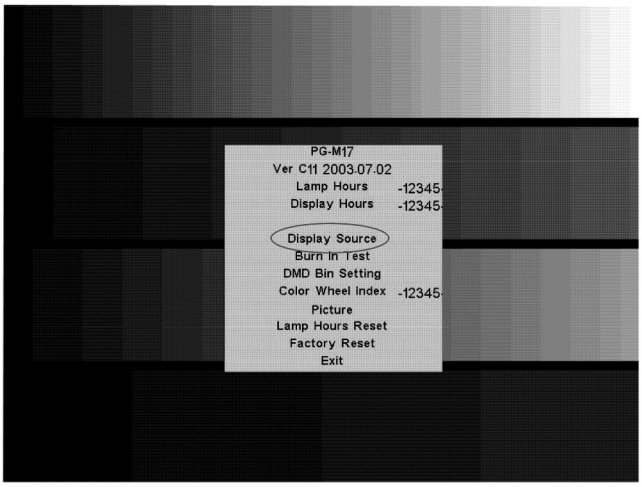
1. Adjustment of Color Wheel Sensor

- Adjustment needed
  1. When the color wheel unit has been replaced.
  2. When the color wheel sensor has been replaced.
  3. When the optical drive unit has been replaced (If a deviation from normal setting is found).

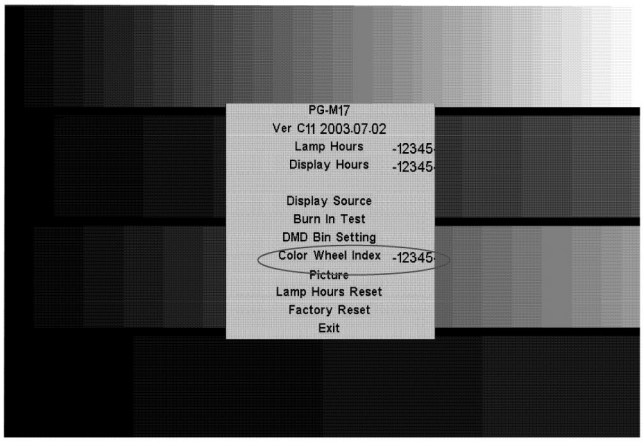
- Tools Required
  1. Personal computer (run on Windows 95/98)
  2. RGB cable

2. Color Wheel Index Adjustment

1. Press "Up", "Up", "Left" button to enter Service Mode. Choose "64 Intensities for Primary Colors" pattern of DMW, then choice "Display Source" to display image.



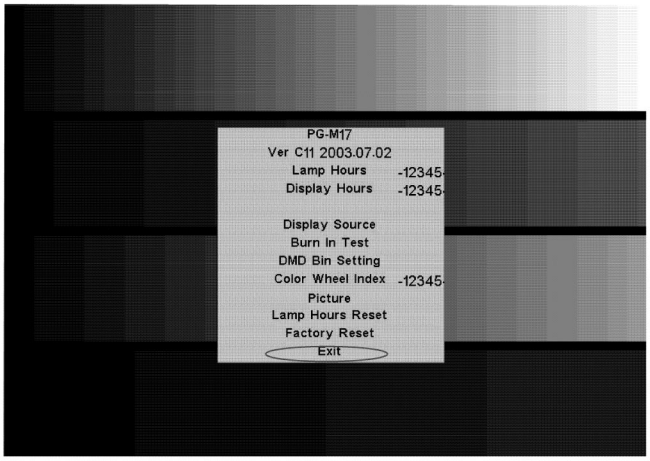
2. Enter "Color Wheel Index" for adjustment.



3. Use "Left" or "Right" button to adjust the color wheel index, still the screen without abnormal color.

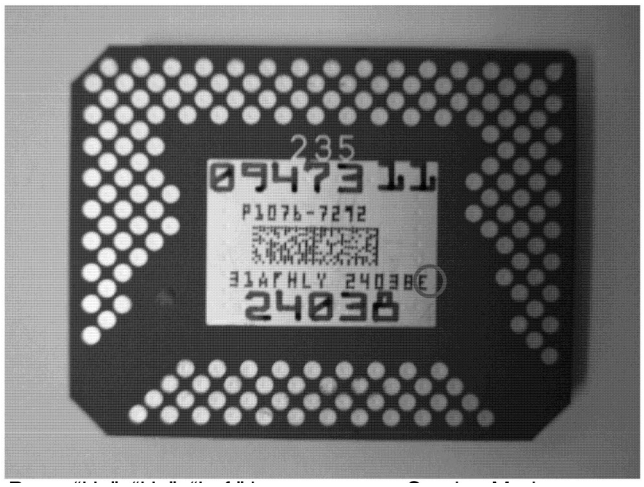


4. Press "Up" or "Down" button to return Service Mode, then choice "EXIT" to leave.

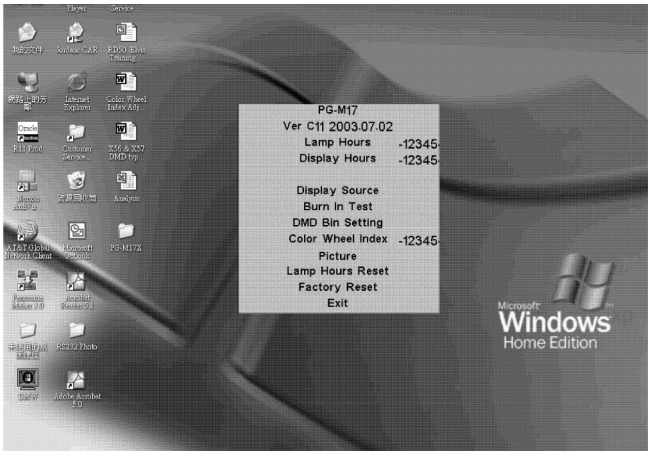


3. DMD Chip Setting SOP

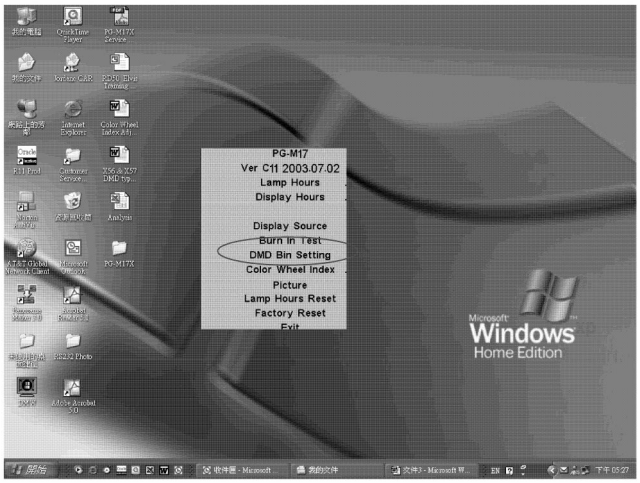
1. Records the type of DMD chip (An English letter in capital) before assembly.



2. Press "Up", "Up", "Left" button to enter Service Mode.



3. Enter "DMD Bin Setting" for the setting.



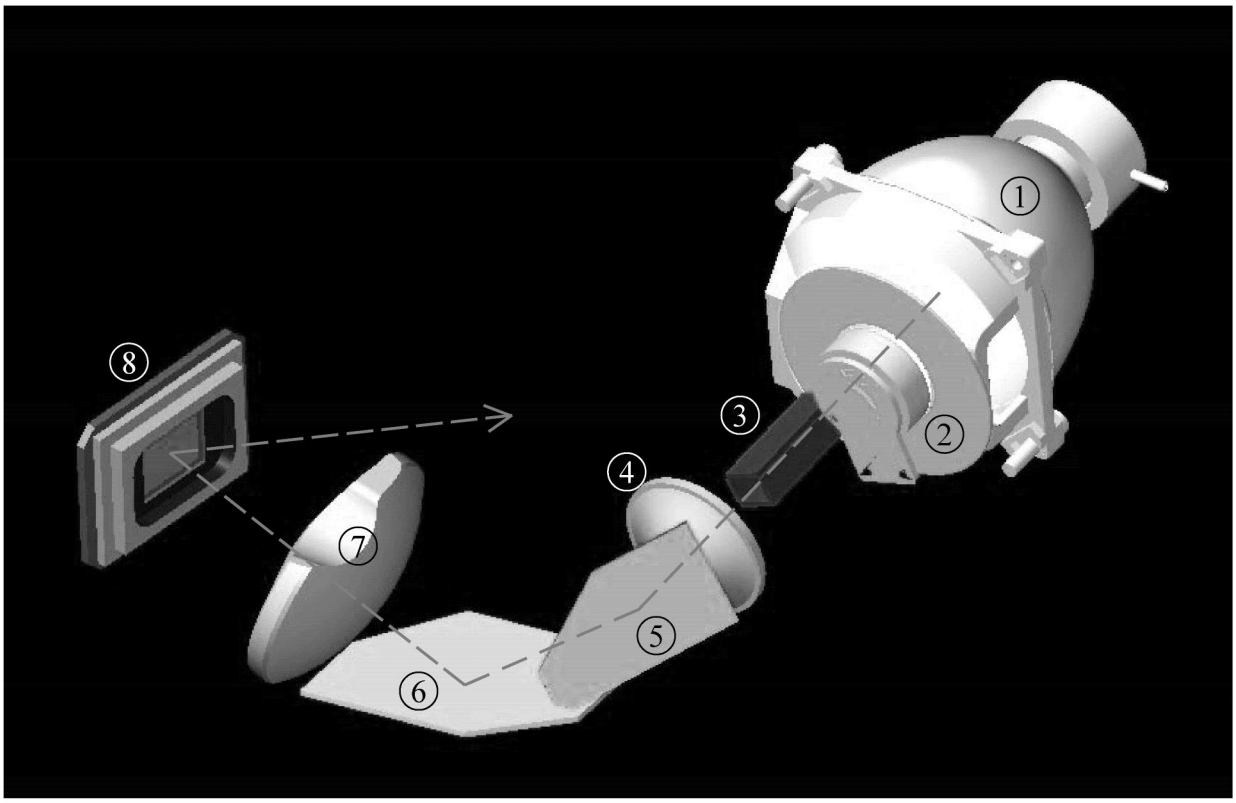
4. Press "Up" or "Down" button to select the DMD type, then press "Enter" button.



5. Choice "Exit" to leave setting mode.

THE OPTICAL UNIT OUTLINE

<Conceptual Drawing>



1. 150W P-VIP Lamp
2. Color Wheel
3. Hollow Rod
4. Condenser Lens
6. Mirror 1
7. Mirror 2
8. Relay Lens
9. DMD Module

<Basic Functions>

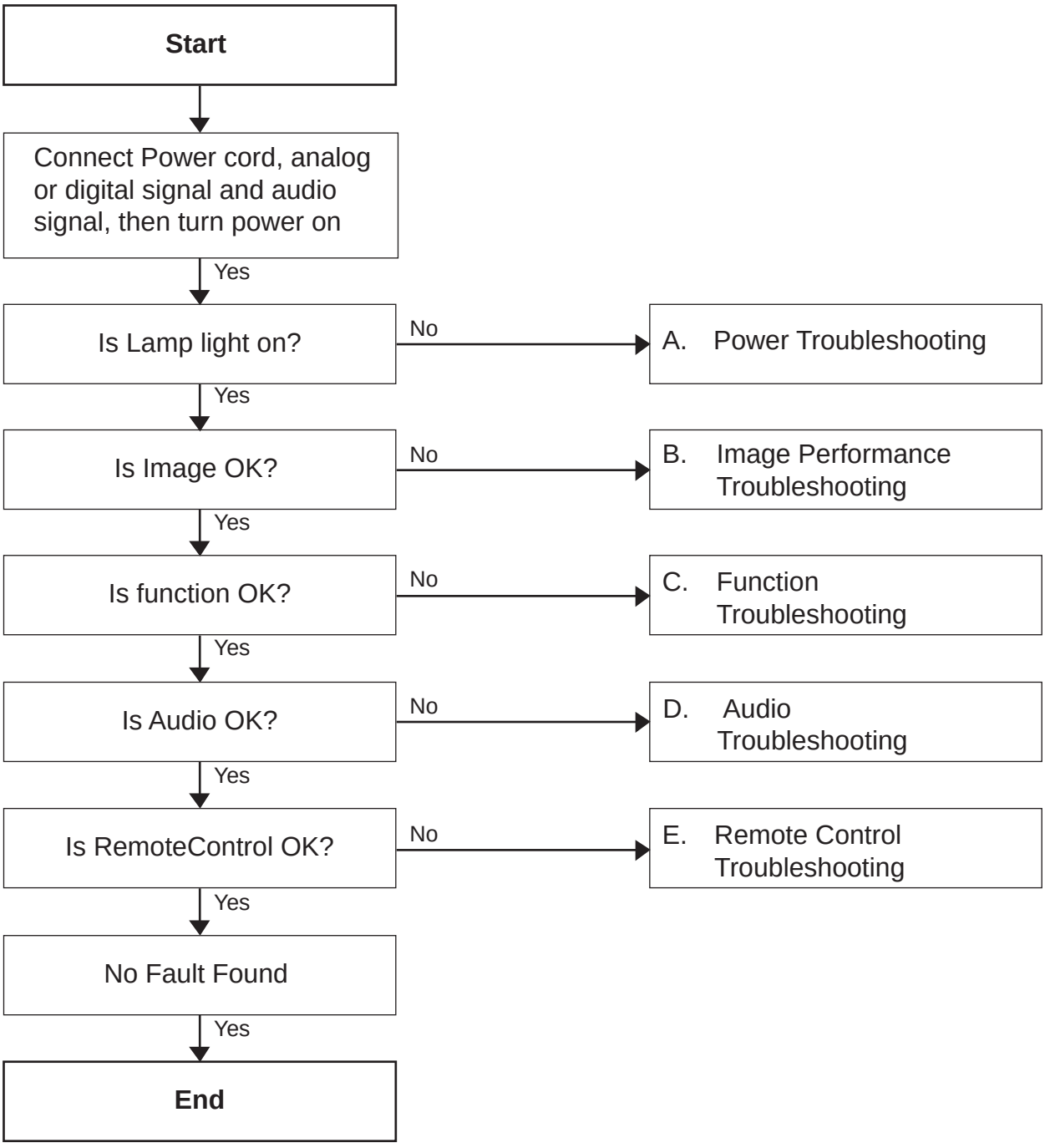
- 150W P-VIP Lamp : The light source.
- Color Wheel : Separating the light beam into and produce R.G.B colors.
- Hollow Rod : Making the light beam uniform.
- Condenser Lens : Condensing the light beam.
- Mirror : Folding optical path.
- DMD Module : Displaying component.

TROUBLE SHOOTING TABLE

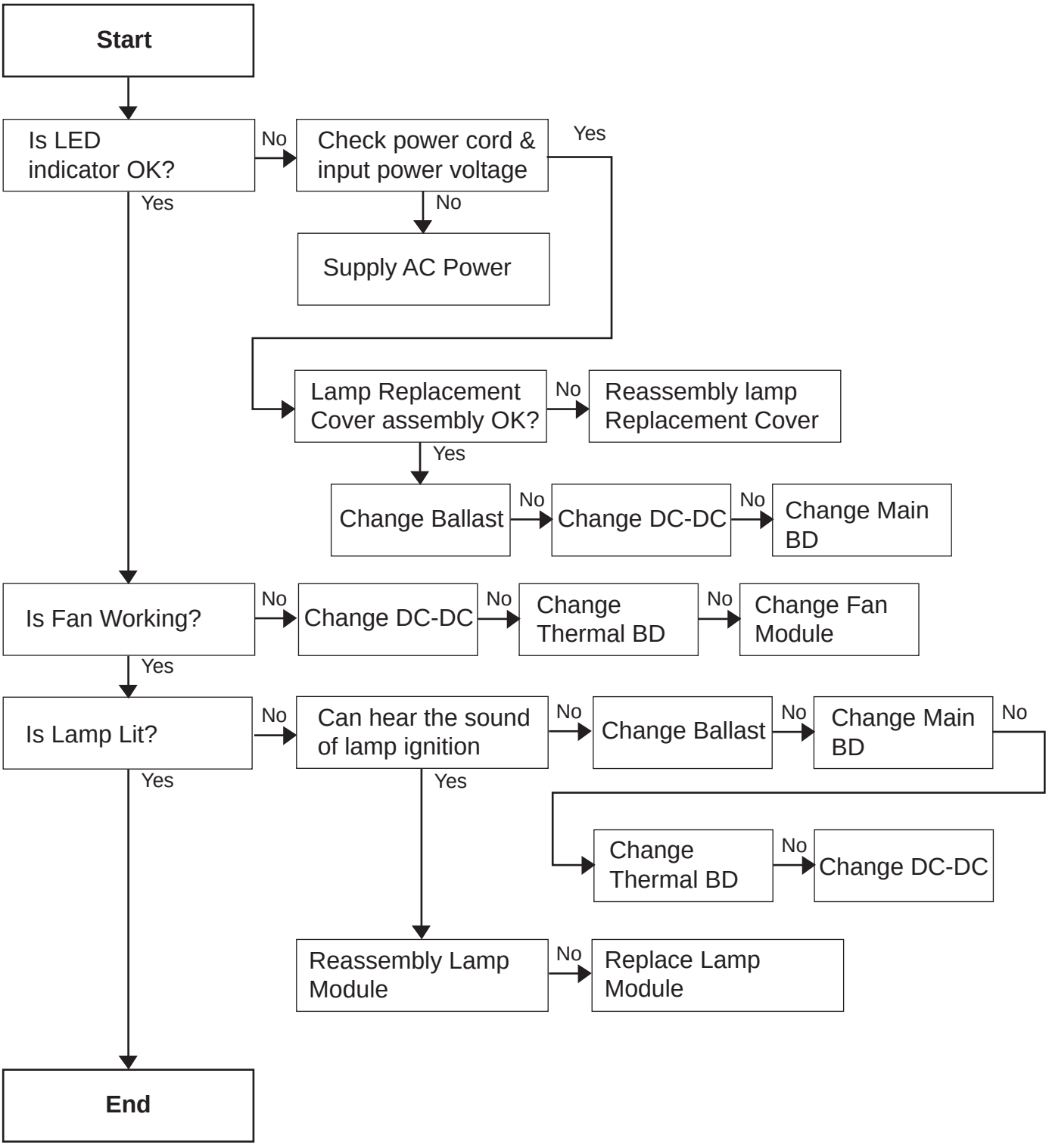
1. Equipment Needed

- PG-M17X Projector
- VESA M1 to VGA Cable
- PC (Personal Computer)
- Audio Input, Video Input
- Screw Drivers

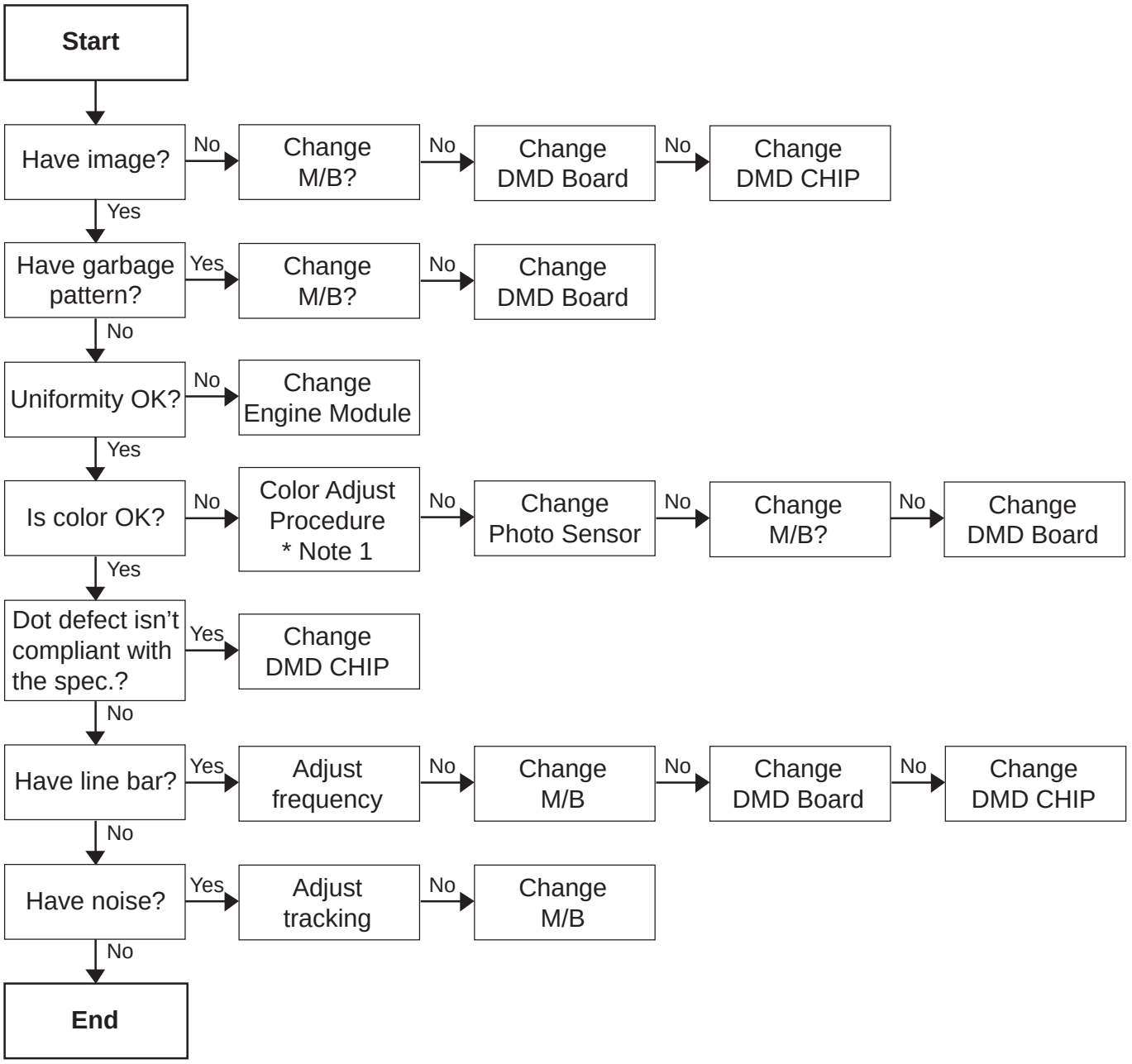
2. Main Procedure



2-1 A. Power Troubleshooting



2-2 B. Performance Troubleshooting



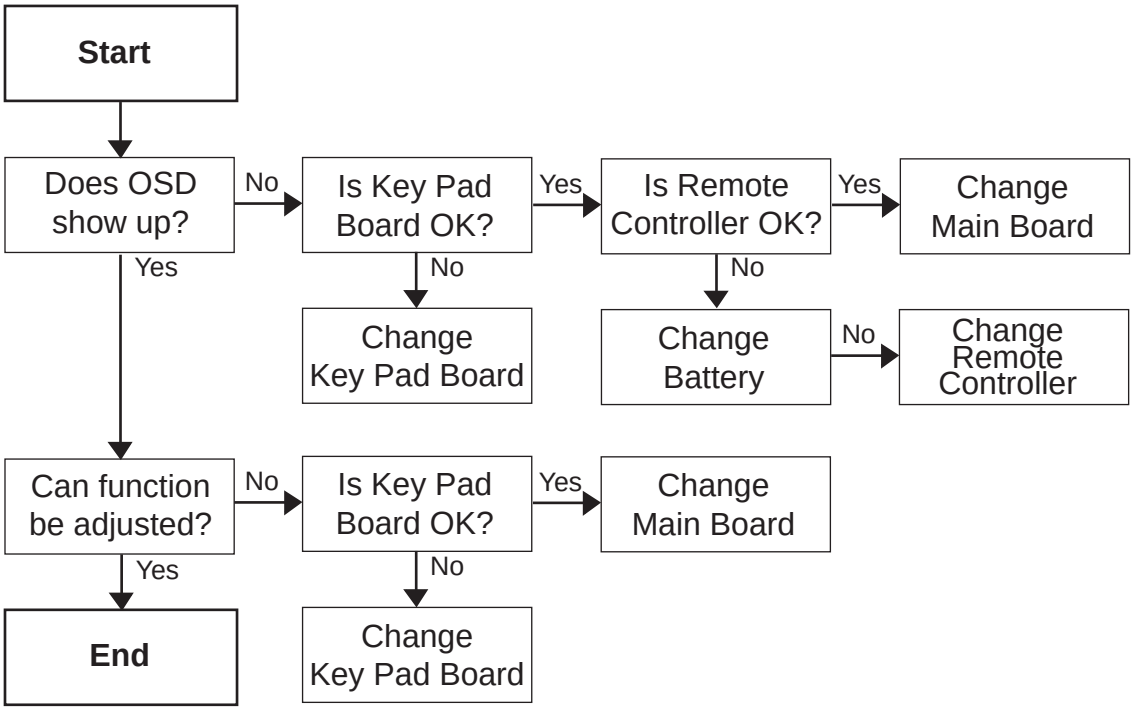
Color Adjust Procedure :

* Notice : PC shall run R.G.B. gray scale pattern.

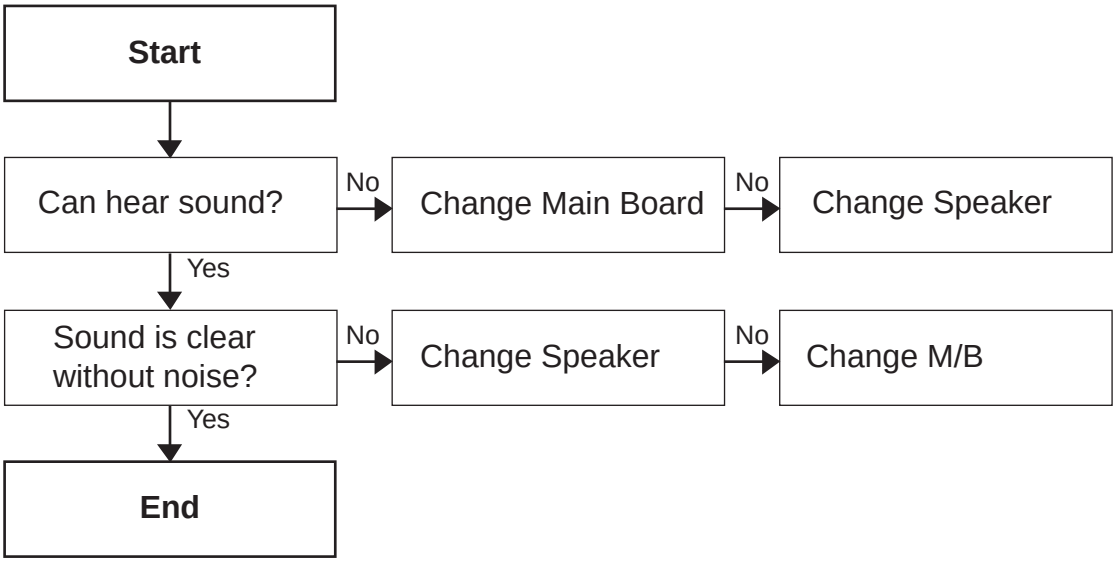
1. Power on. Press "Up", "Up", "Left" button when the "No Signal" show on the screen.
2. Choose "Display Source"
3. Choose Color Wheel Index.
4. Press "Left" or "Right" button to adjust.

● Note 1 : It may need to be used when you replace Main Board or Optical Engine alone.

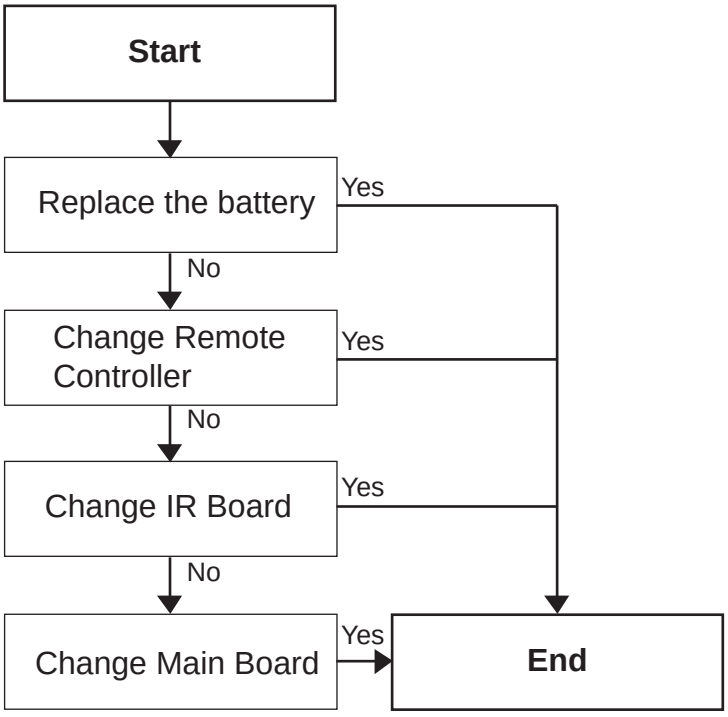
2-3 C. Function Troubleshooting



2-4 D. Audio Troubleshooting

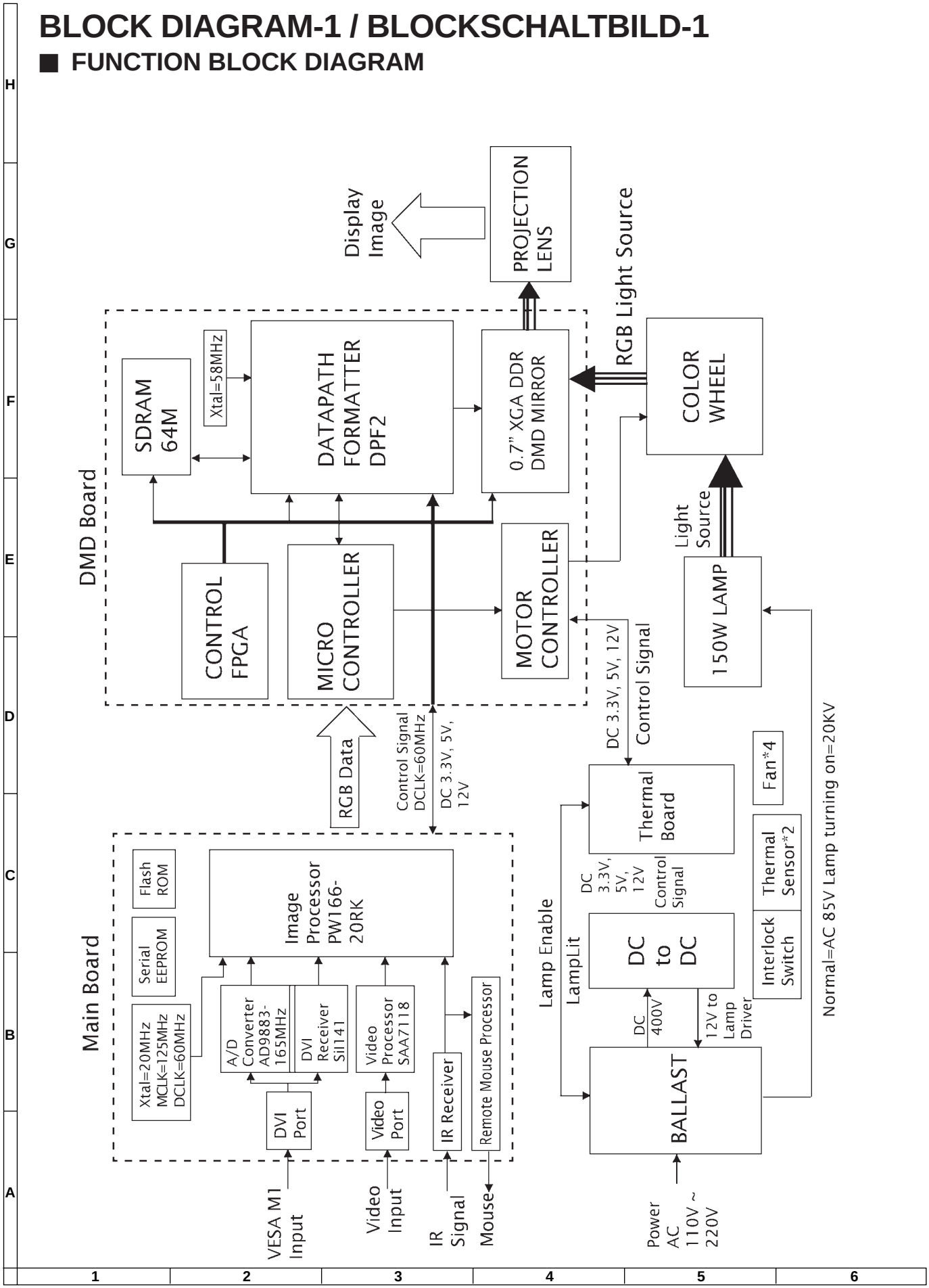


2-5 E. Remote Control Troubleshooting



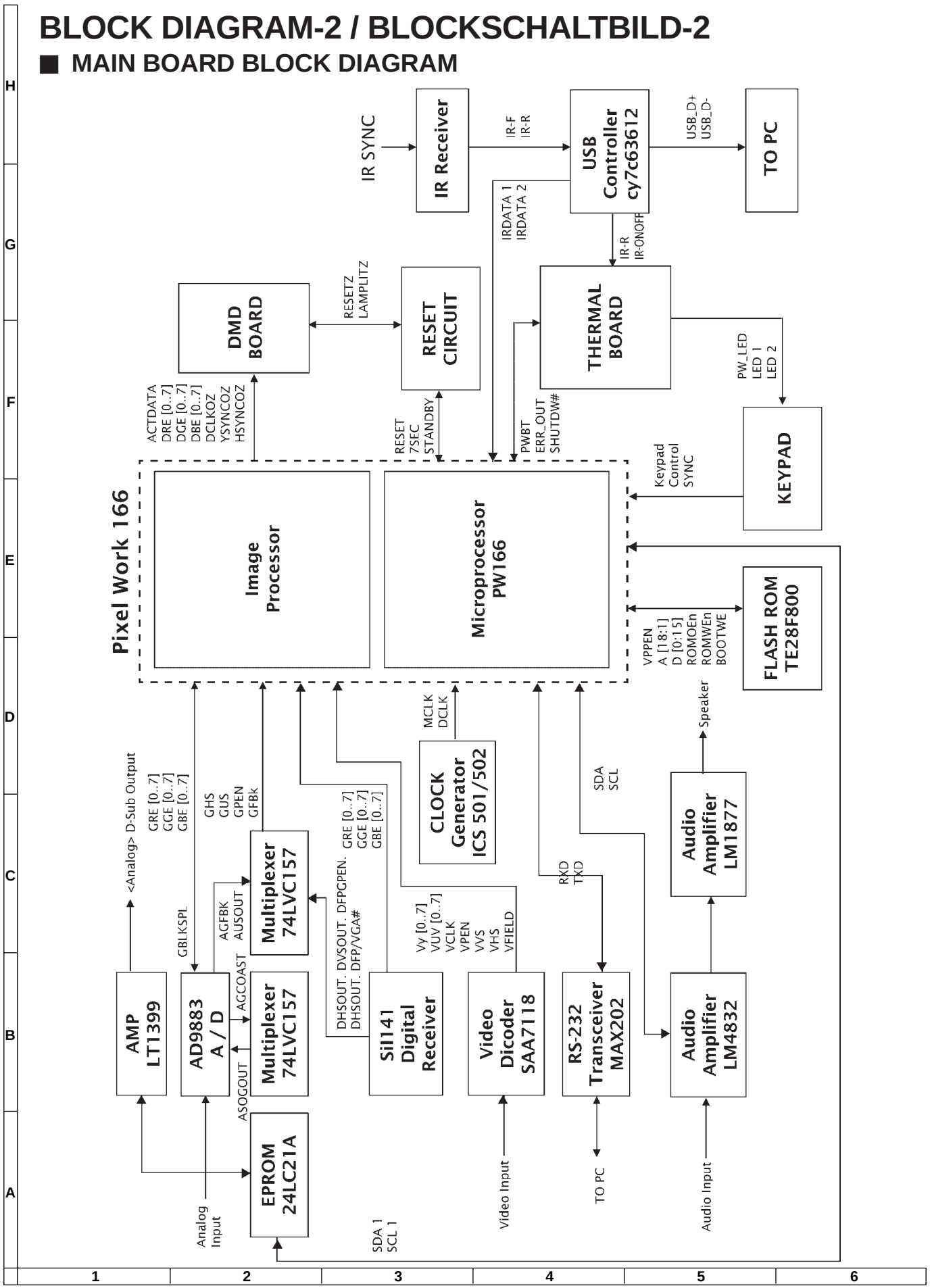
BLOCK DIAGRAM-1 / BLOCKSCHALTBILD-1

■ FUNCTION BLOCK DIAGRAM



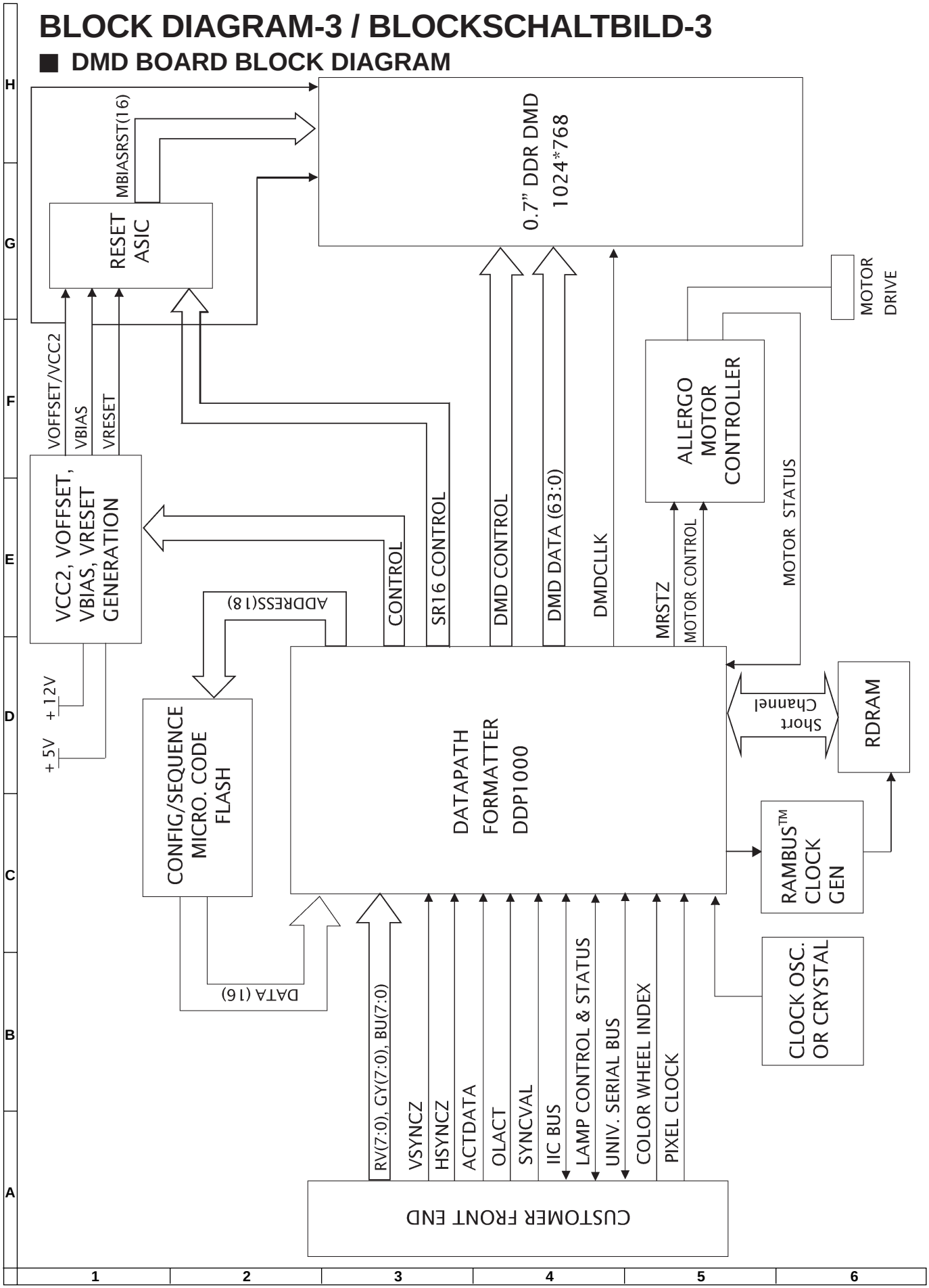
BLOCK DIAGRAM-2 / BLOCKSCHALTBILD-2

■ MAIN BOARD BLOCK DIAGRAM



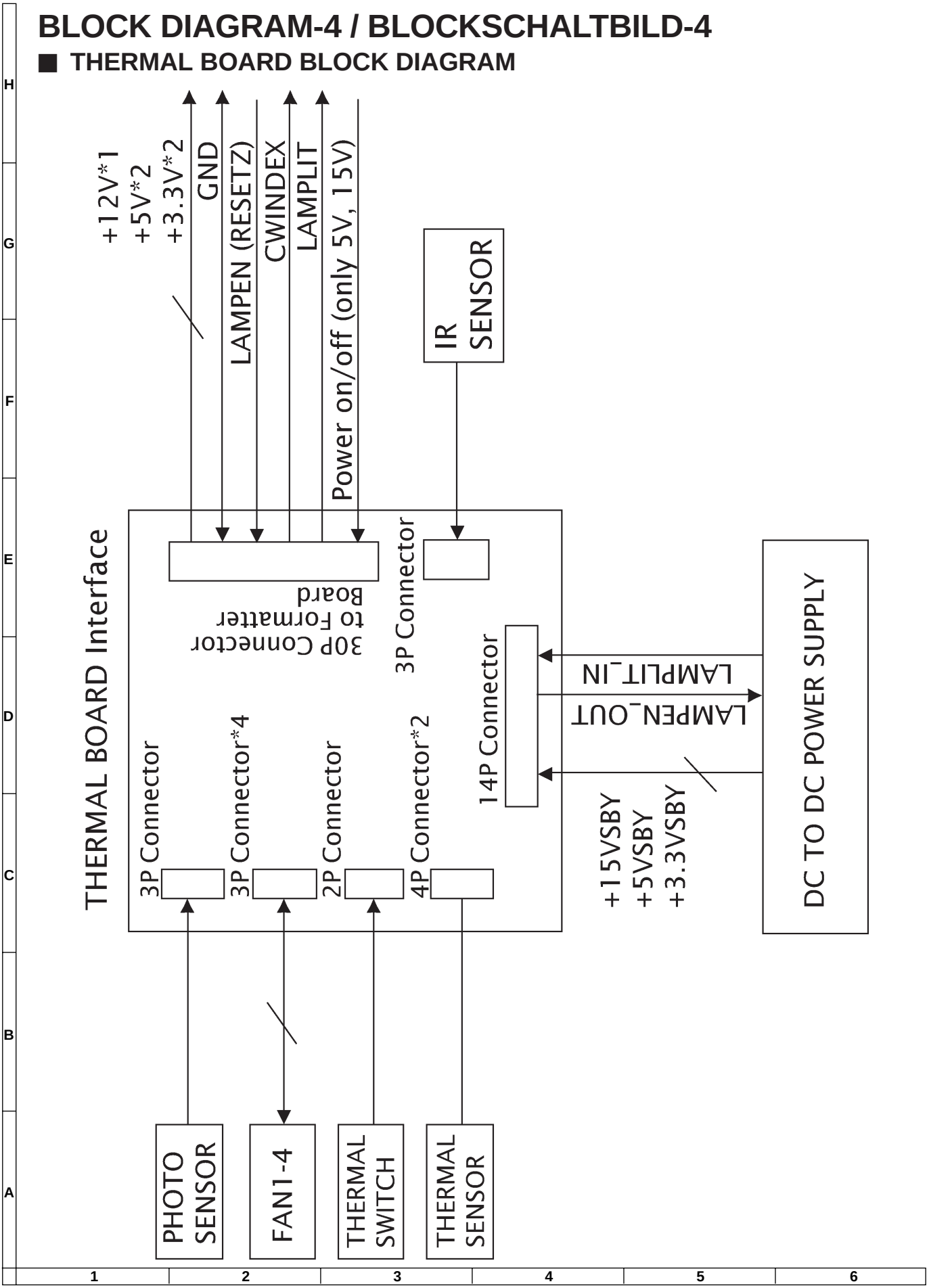
BLOCK DIAGRAM-3 / BLOCKSCHALTBILD-3

■ DMD BOARD BLOCK DIAGRAM



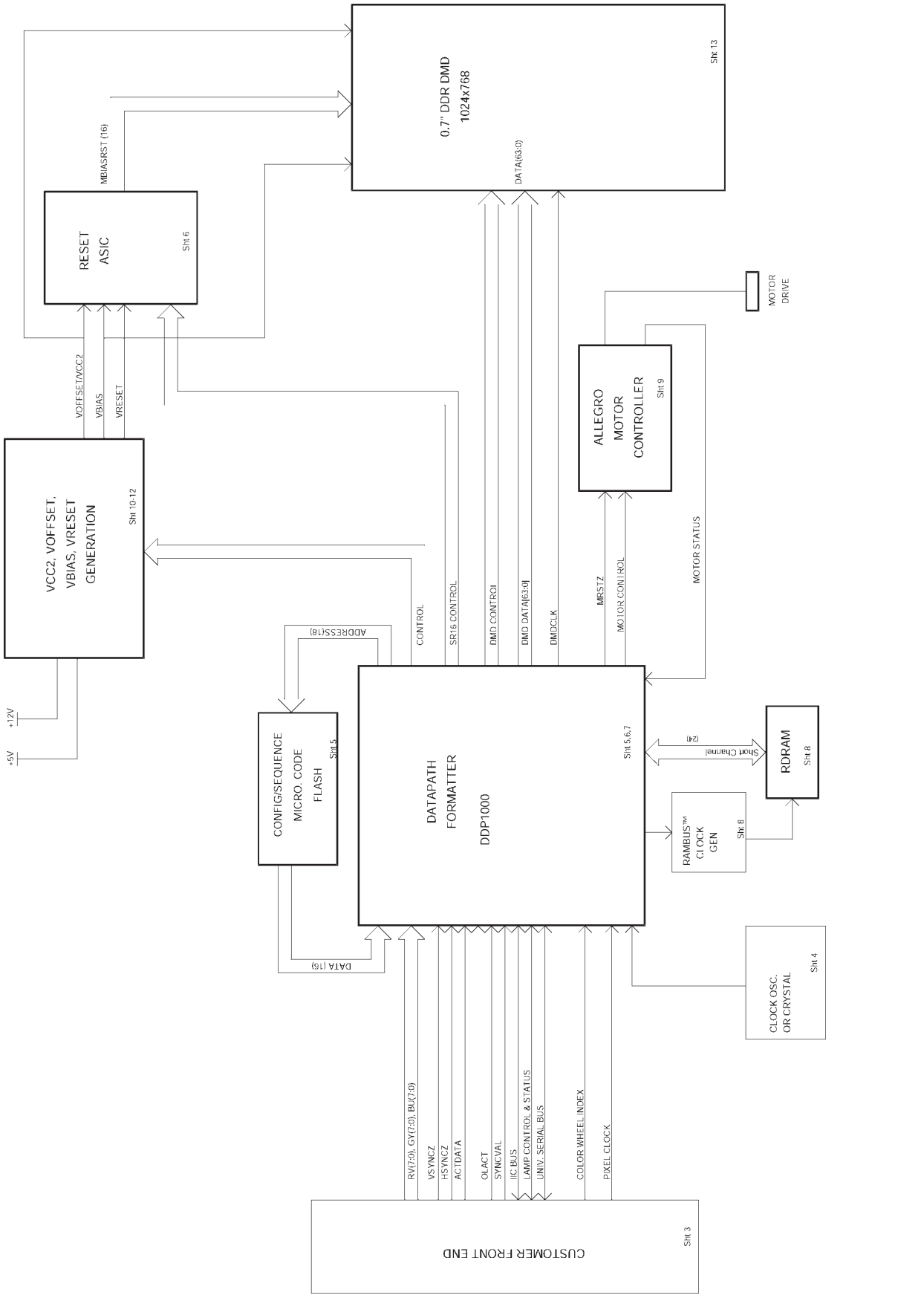
BLOCK DIAGRAM-4 / BLOCKSCHALTBILD-4

■ THERMAL BOARD BLOCK DIAGRAM



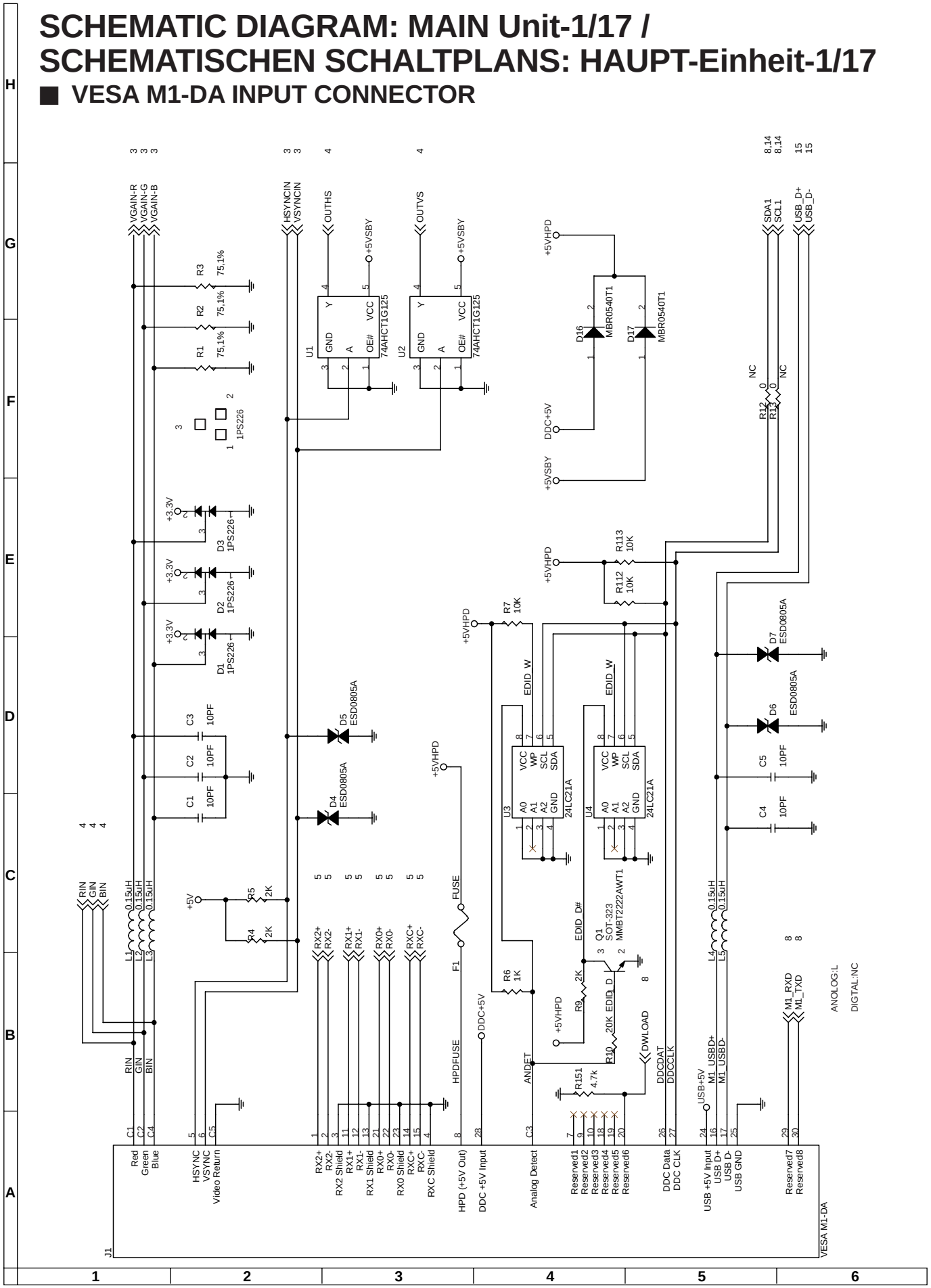
BLOCK DIAGRAM-5 / BLOCKSCHALTBILD-5

■ THERMAL BOARD FUNCTIONAL BLOCK DIAGRAM



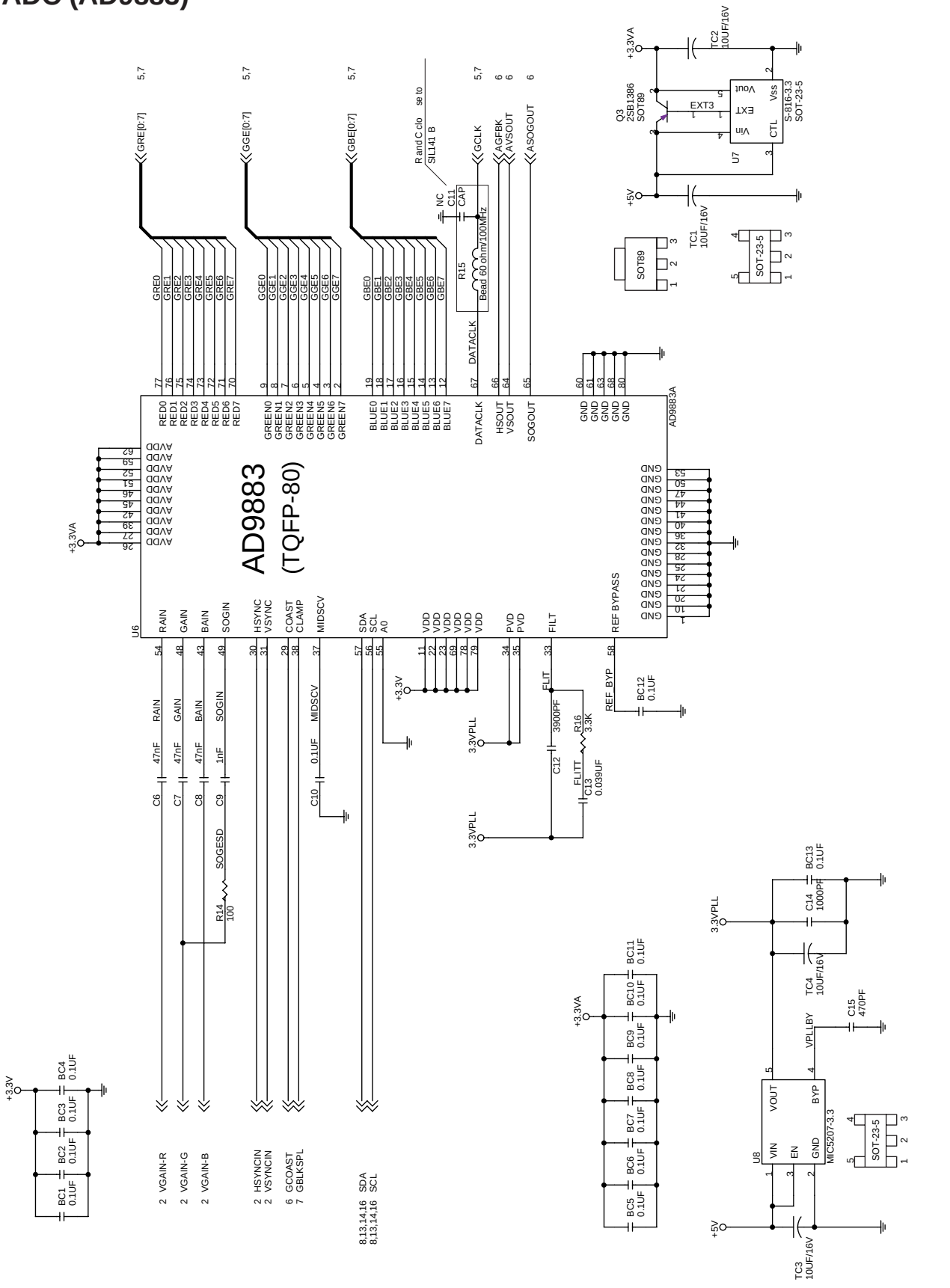
SCHEMATIC DIAGRAM: MAIN Unit-1/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-1/17

■ VESA M1-DA INPUT CONNECTOR



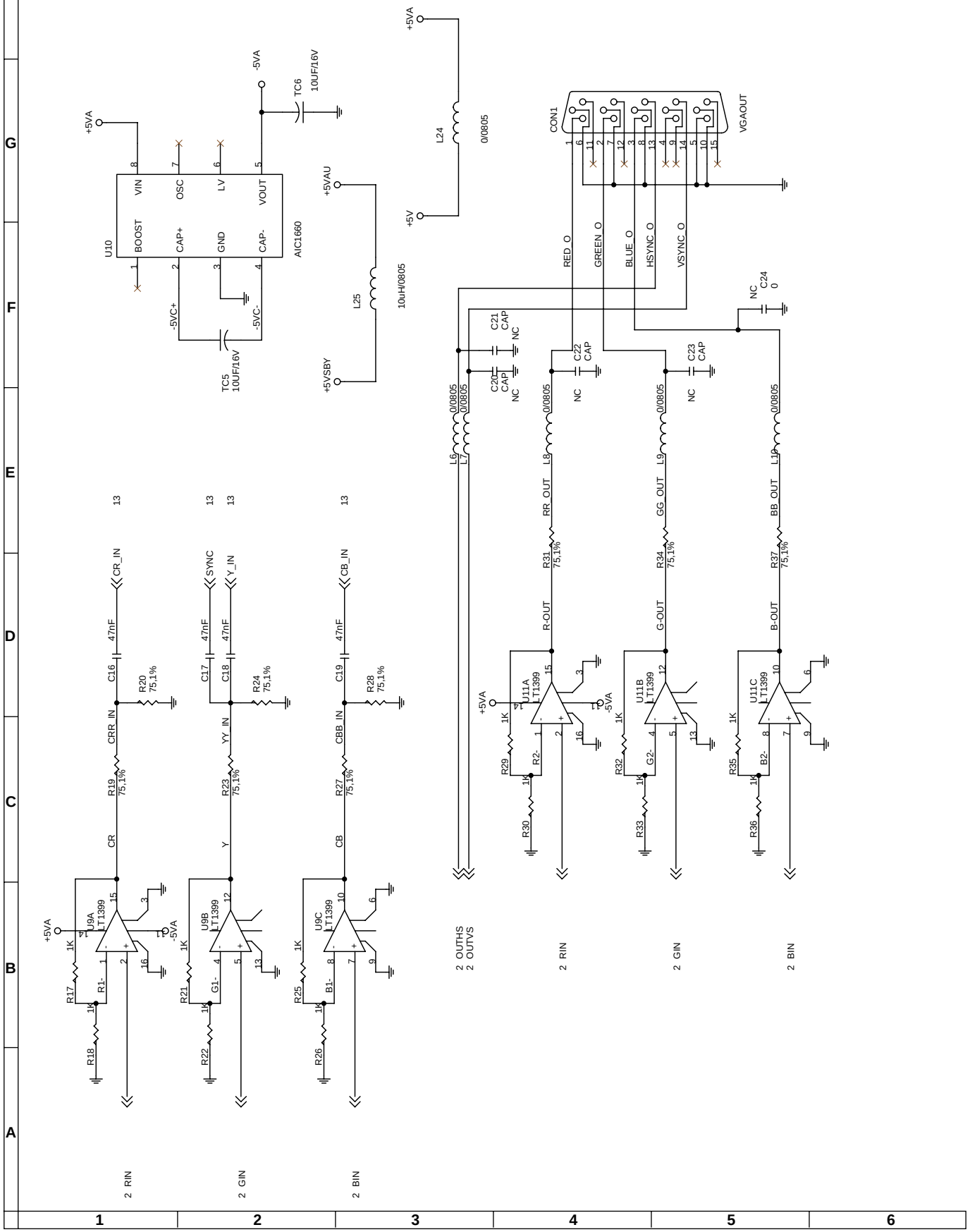
SCHEMATIC DIAGRAM: MAIN Unit-2/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-2/17

■ ADC (AD9883)



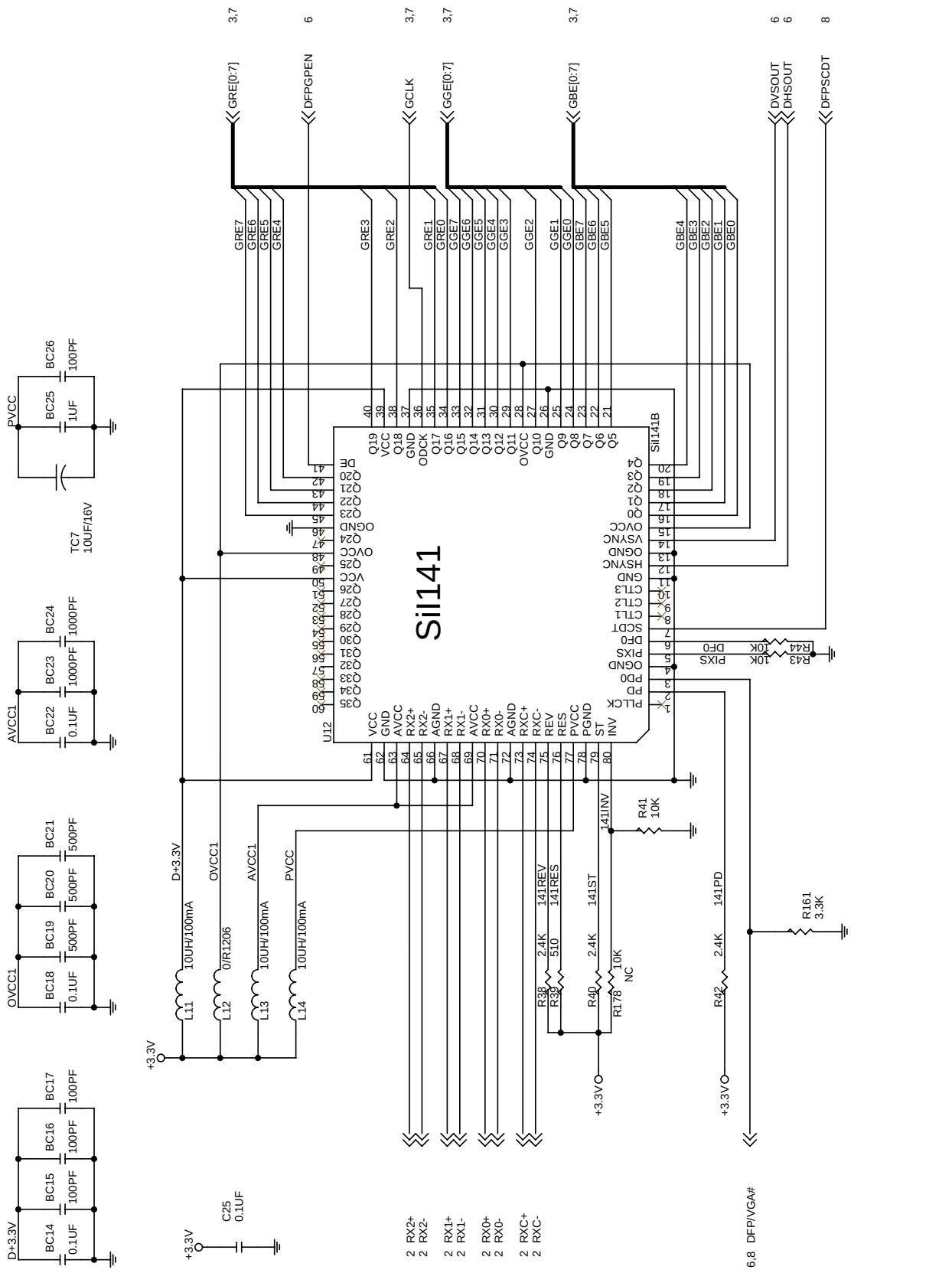
SCHEMATIC DIAGRAM: MAIN Unit-3/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-3/17

■ YCbCr and RGB DRIVER



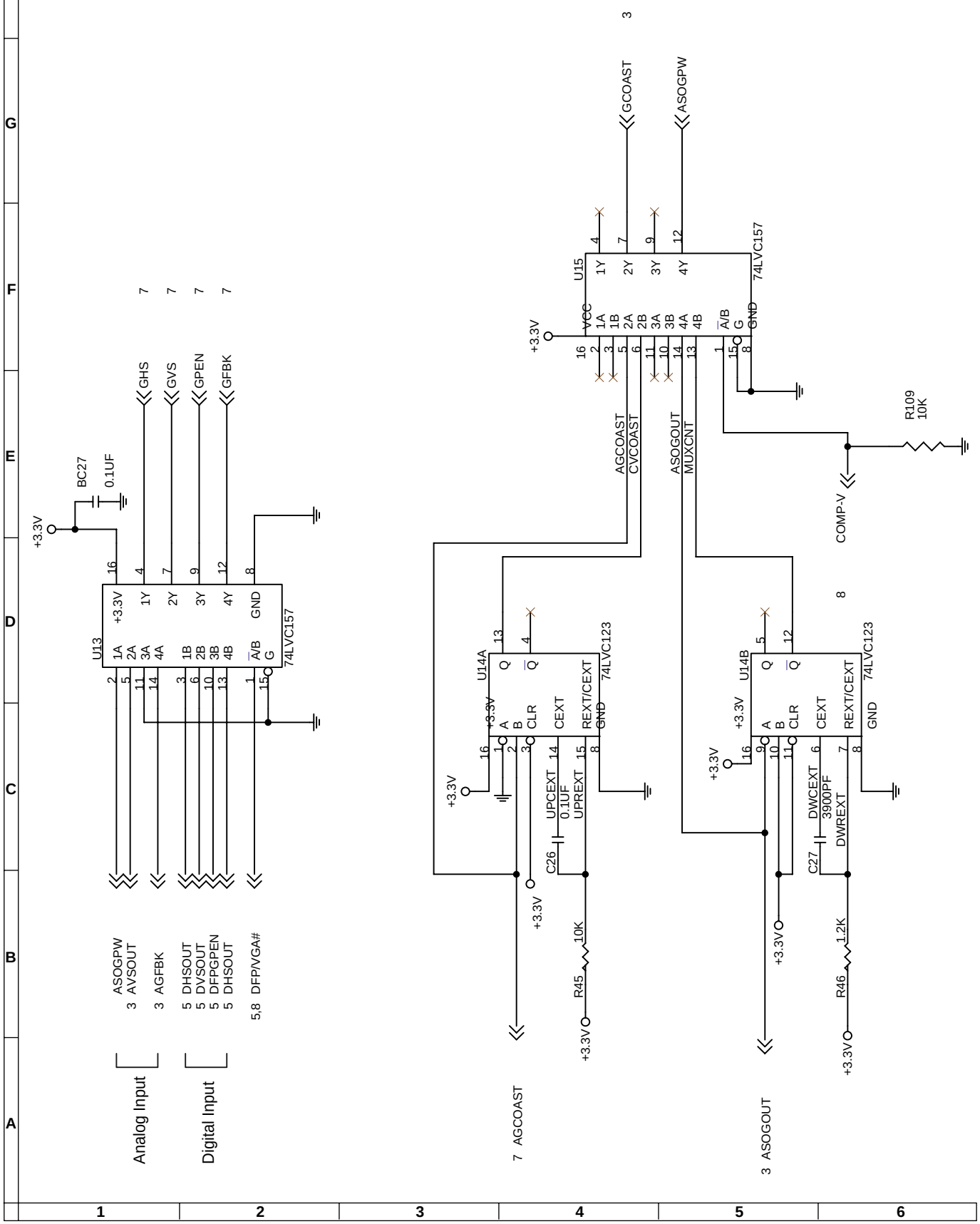
SCHEMATIC DIAGRAM: MAIN Unit-4/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-4/17

■ TMDS RECEIVER (SiL141B)


Sil141
Sil141B
U12
GRE[0:7]
DFPGPEN
GCLK
GGE[0:7]
GBE[0:7]
DVSOUT
DHSOUT
DFPSCDT
GRE7
GRE6
GRE5
GRE4
GRE3
GRE2
GRE1
GRE0
GGE7
GGE6
GGE5
GGE4
GGE3
GGE2
GGE1
GGE0
GBE7
GBE6
GBE5
GBE4
GBE3
GBE2
GBE1
GBE0
VCC
GND
AVCC
RX2+
RX2-
AGND
RX1+
RX1-
AVCC
RX0+
RX0-
AGND
RXC+
RXC-
REV
RES
PVCC
PGND
ST
INV
PLLCK
PD
PD0
OGND
PIXS
DF0
SCDT
CTL1
CTL2
CTL3
GND
HSYNC
OGND
VSYNC
OVCC
Q0
Q1
Q2
Q3
Q4
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OGND
OVCC
VCC
OVCC
OGND
OVCC
OVCC
OVCC

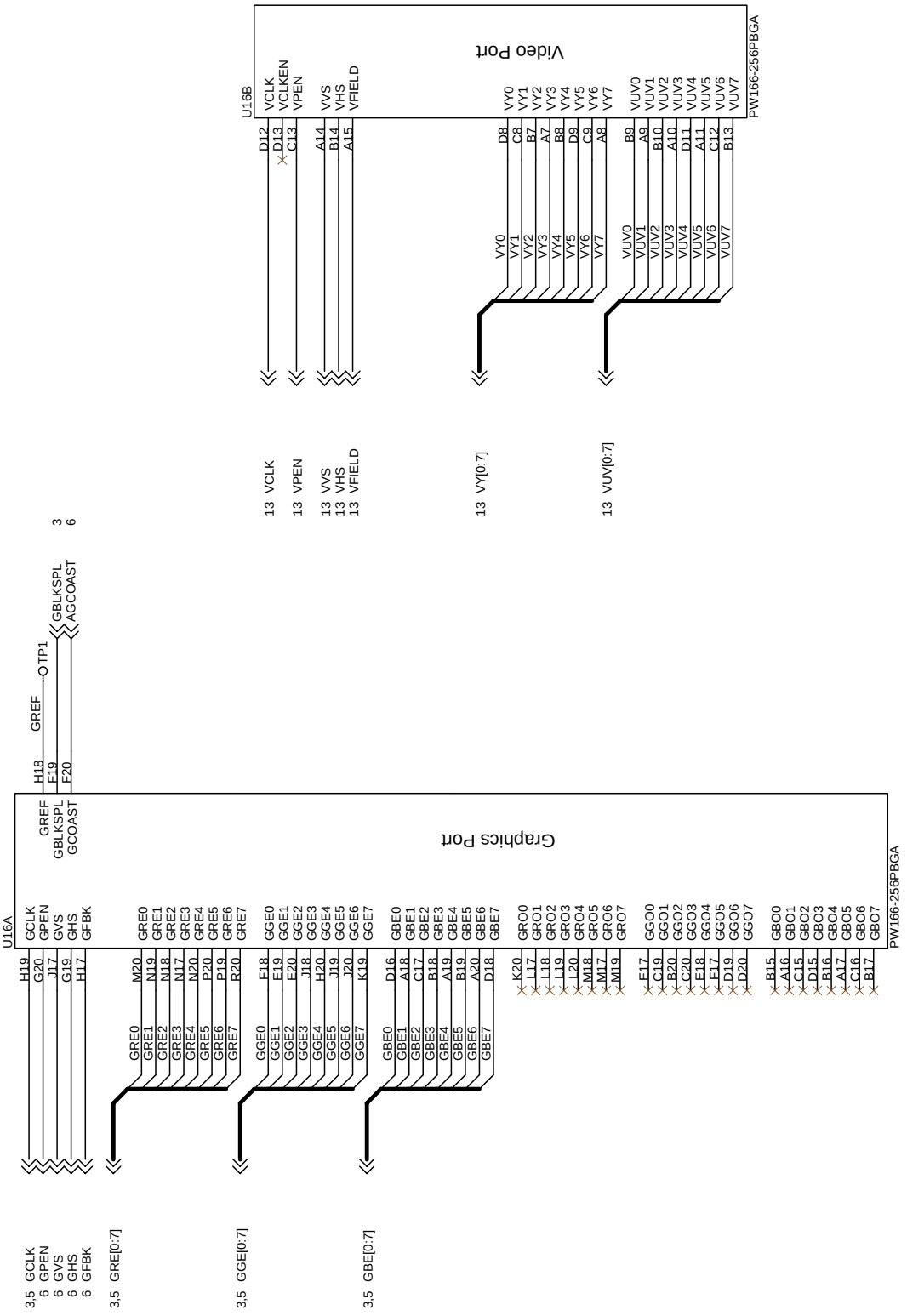
SCHEMATIC DIAGRAM: MAIN Unit-5/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-5/17

■ INPUT MUX and SOG RETRIGGER



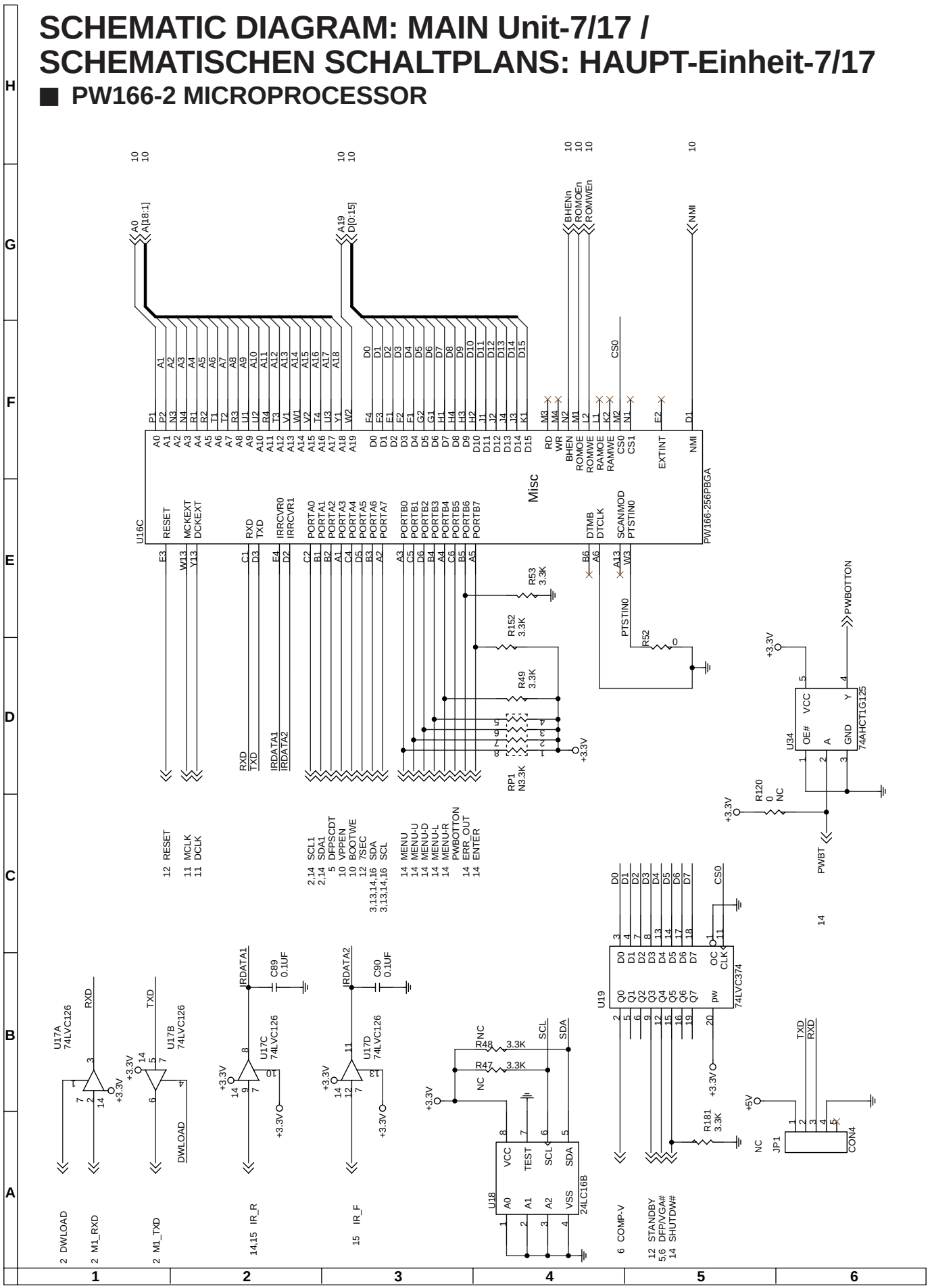
SCHEMATIC DIAGRAM: MAIN Unit-6/17 /
SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-6/17

■ PW166-1 GRAPHICS & VIIDEO PORT



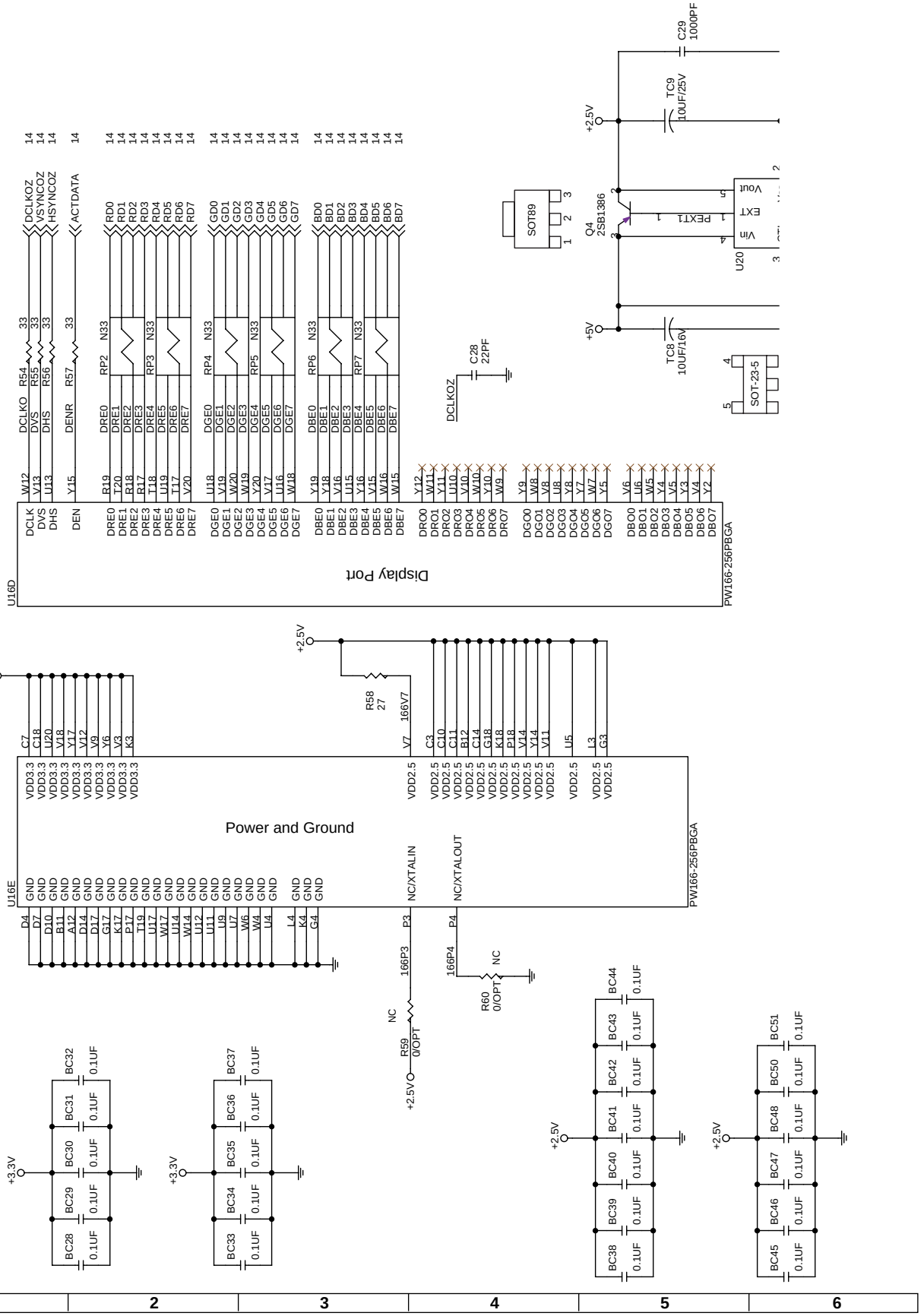
SCHEMATIC DIAGRAM: MAIN Unit-7/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-7/17

■ PW166-2 MICROPROCESSOR



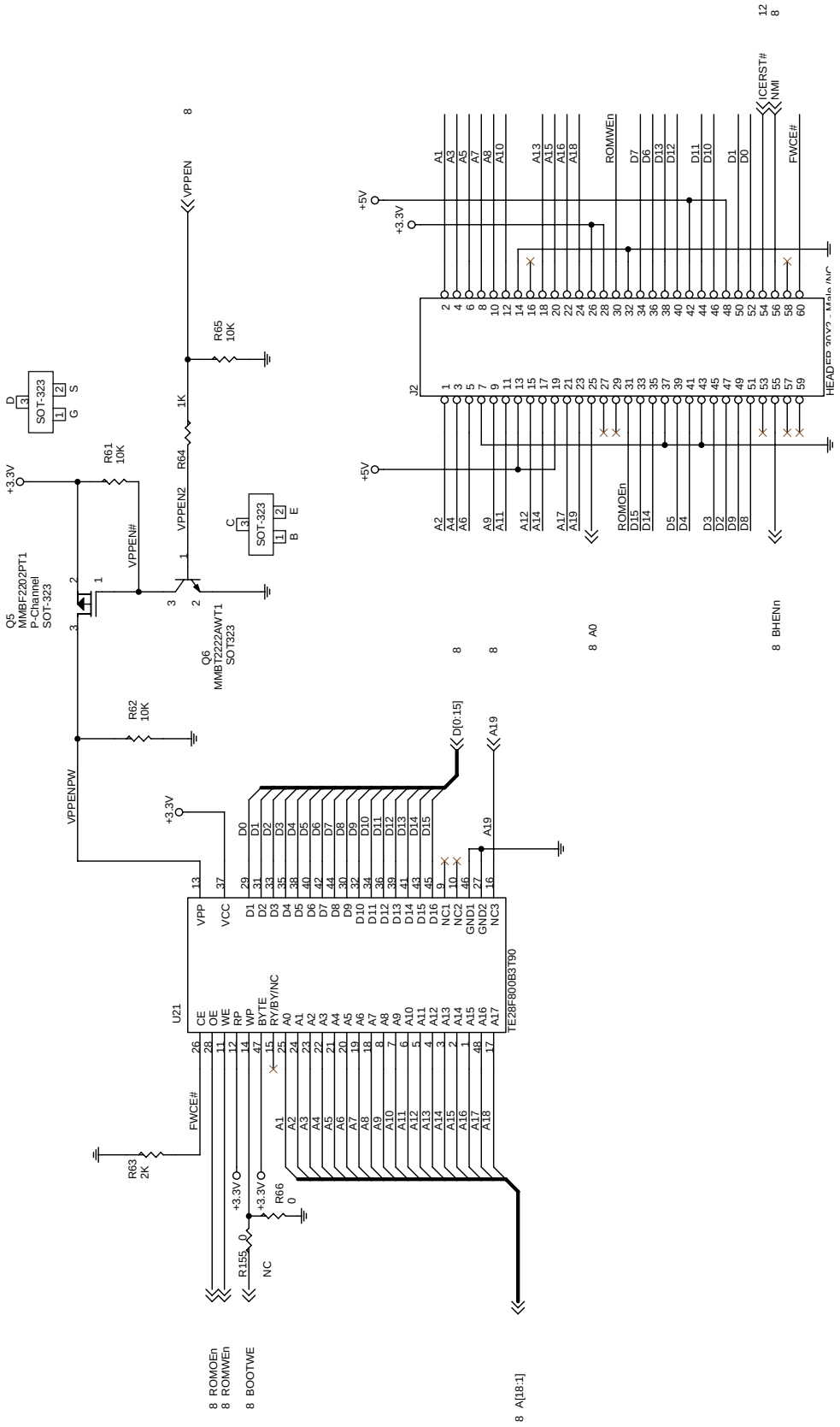
SCHEMATIC DIAGRAM: MAIN Unit-8/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-8/17

■ PW166-3 DISPLAY PORT



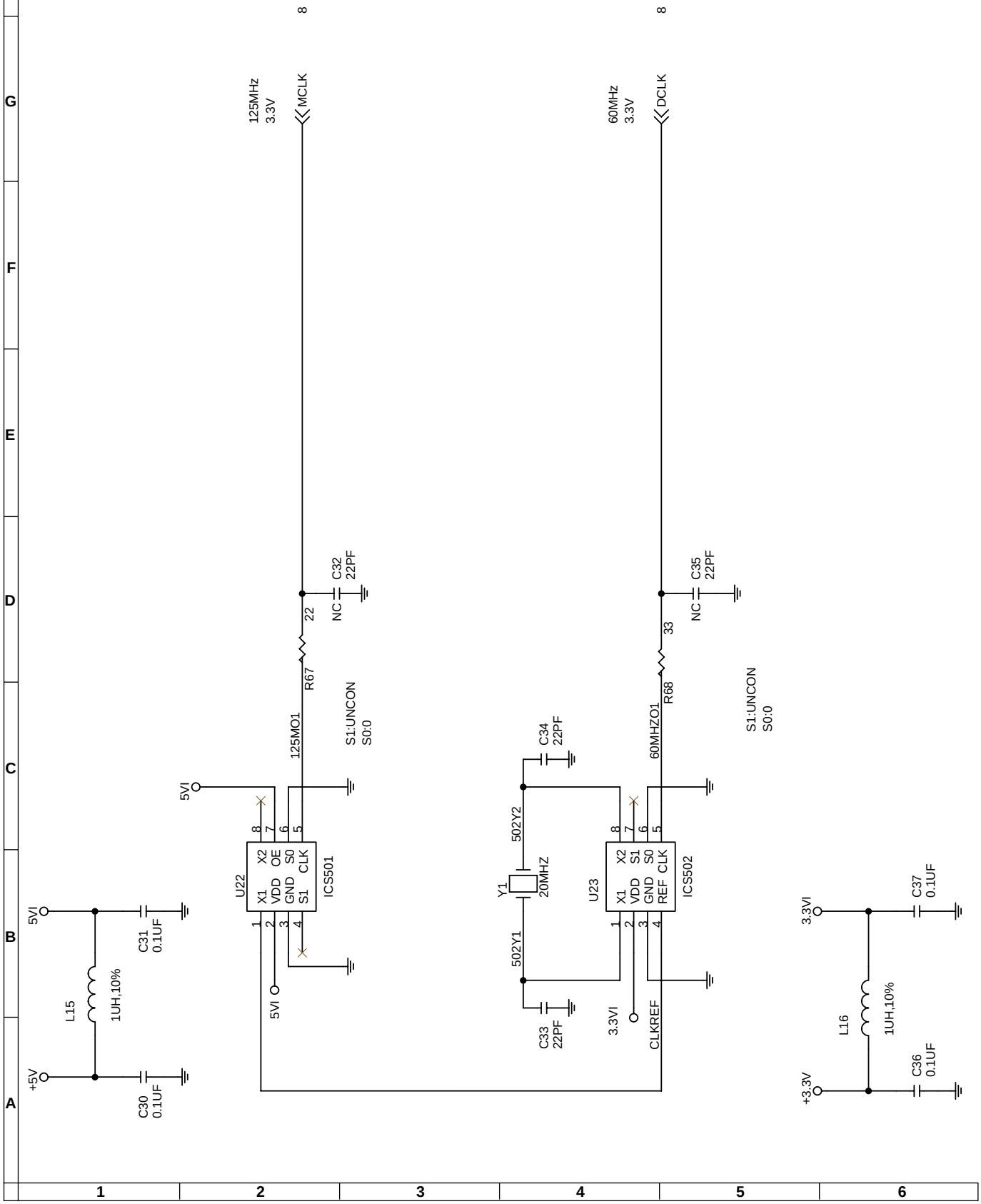
SCHEMATIC DIAGRAM: MAIN Unit-9/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-9/17

■ FLASH MEMORY / FLASH-SPEICHER



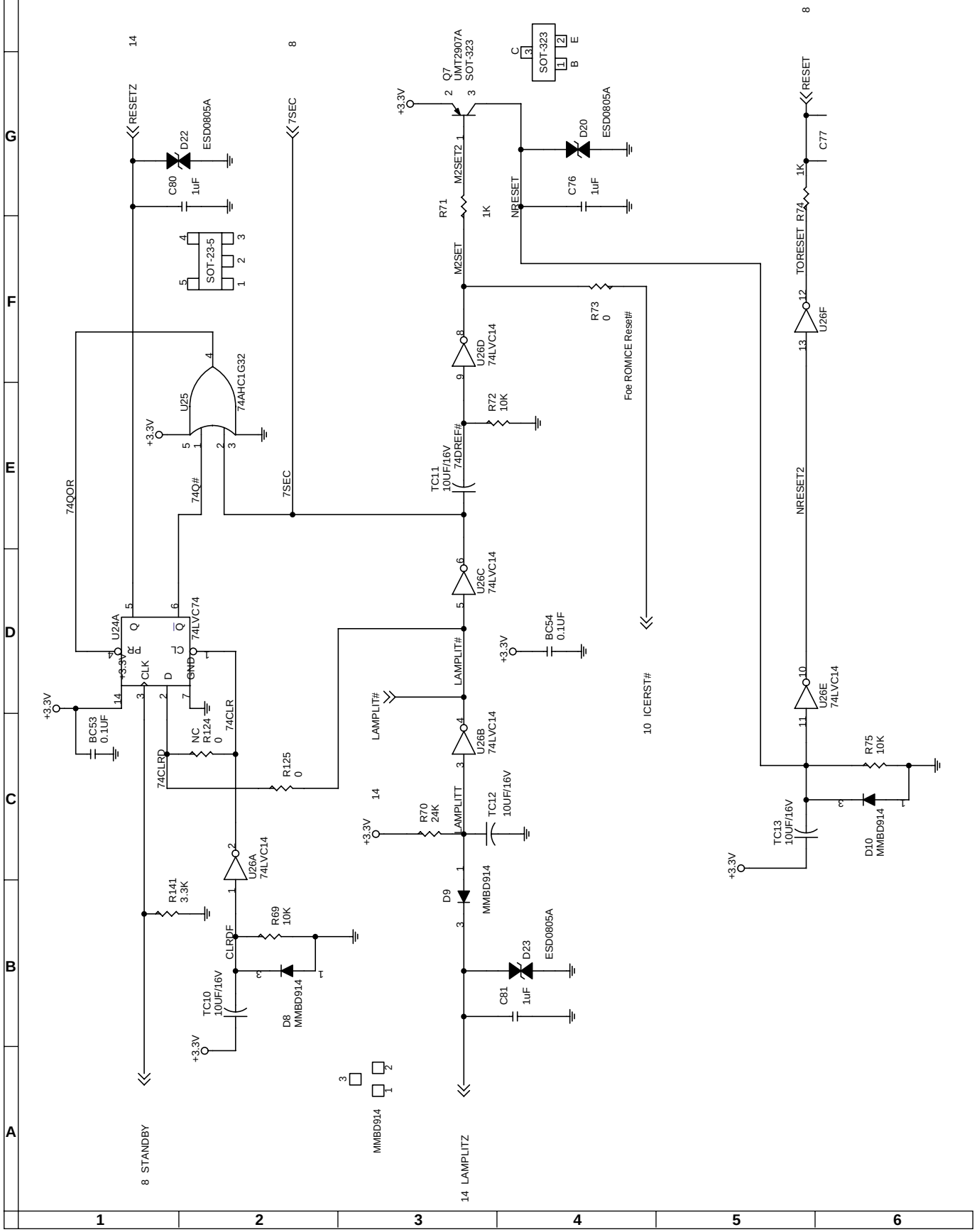
SCHEMATIC DIAGRAM: MAIN Unit-10/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-10/17

■ CLOCK GENERATOR



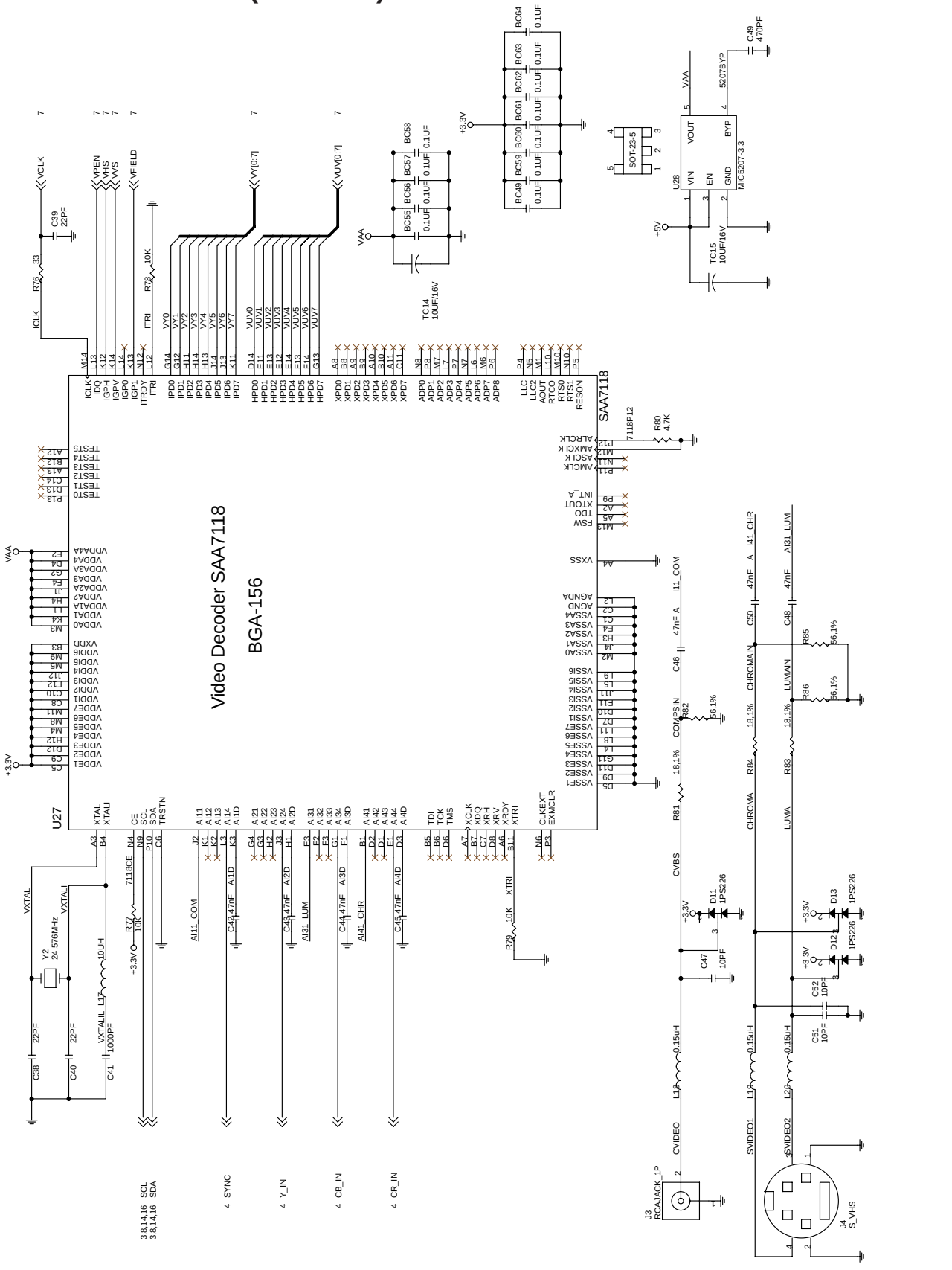
SCHEMATIC DIAGRAM: MAIN Unit-11/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-11/17

■ RESET CIRCUIT



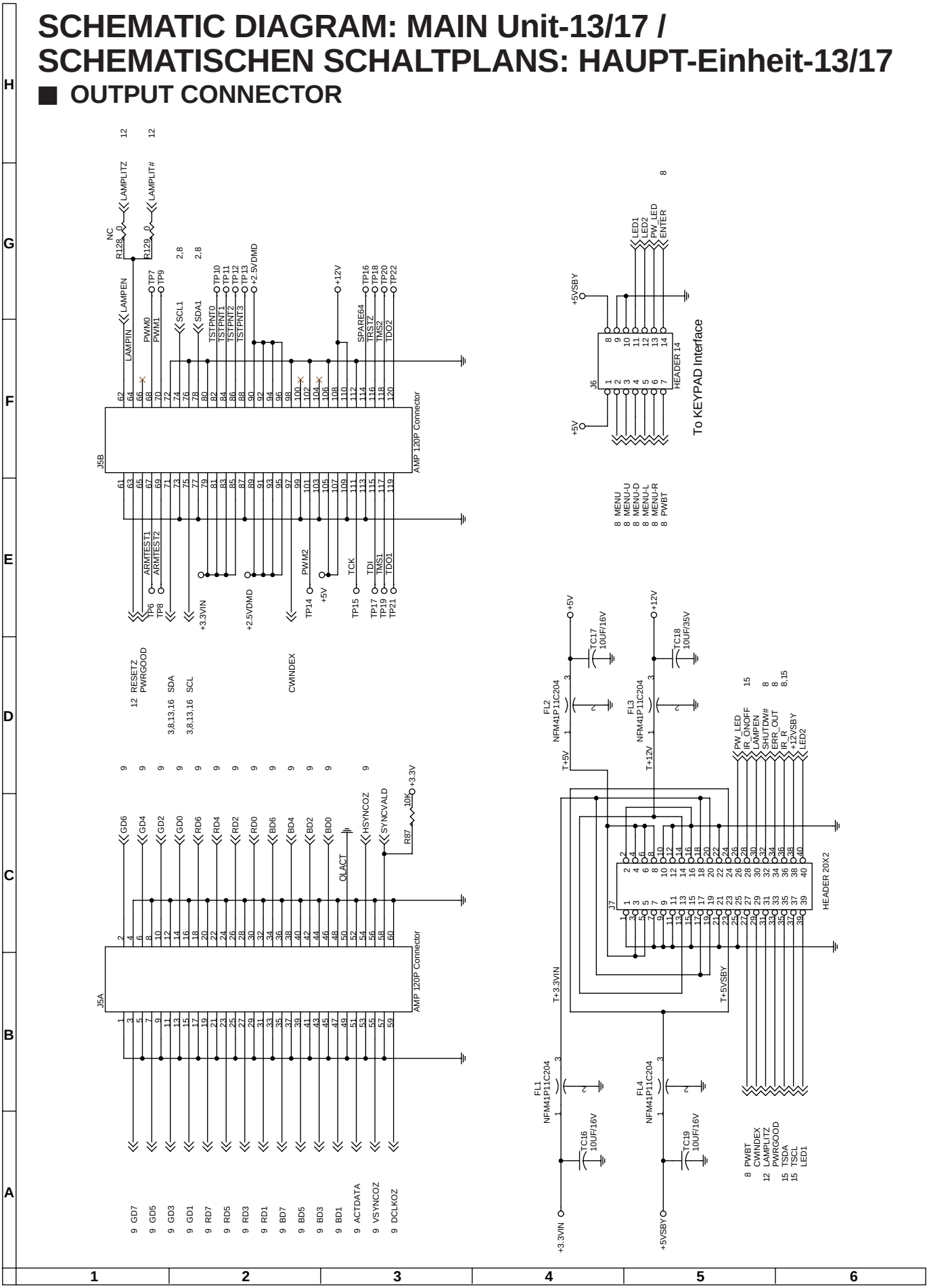
SCHEMATIC DIAGRAM: MAIN Unit-12/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-12/17

■ VIDEO DECODER (SAA7118)



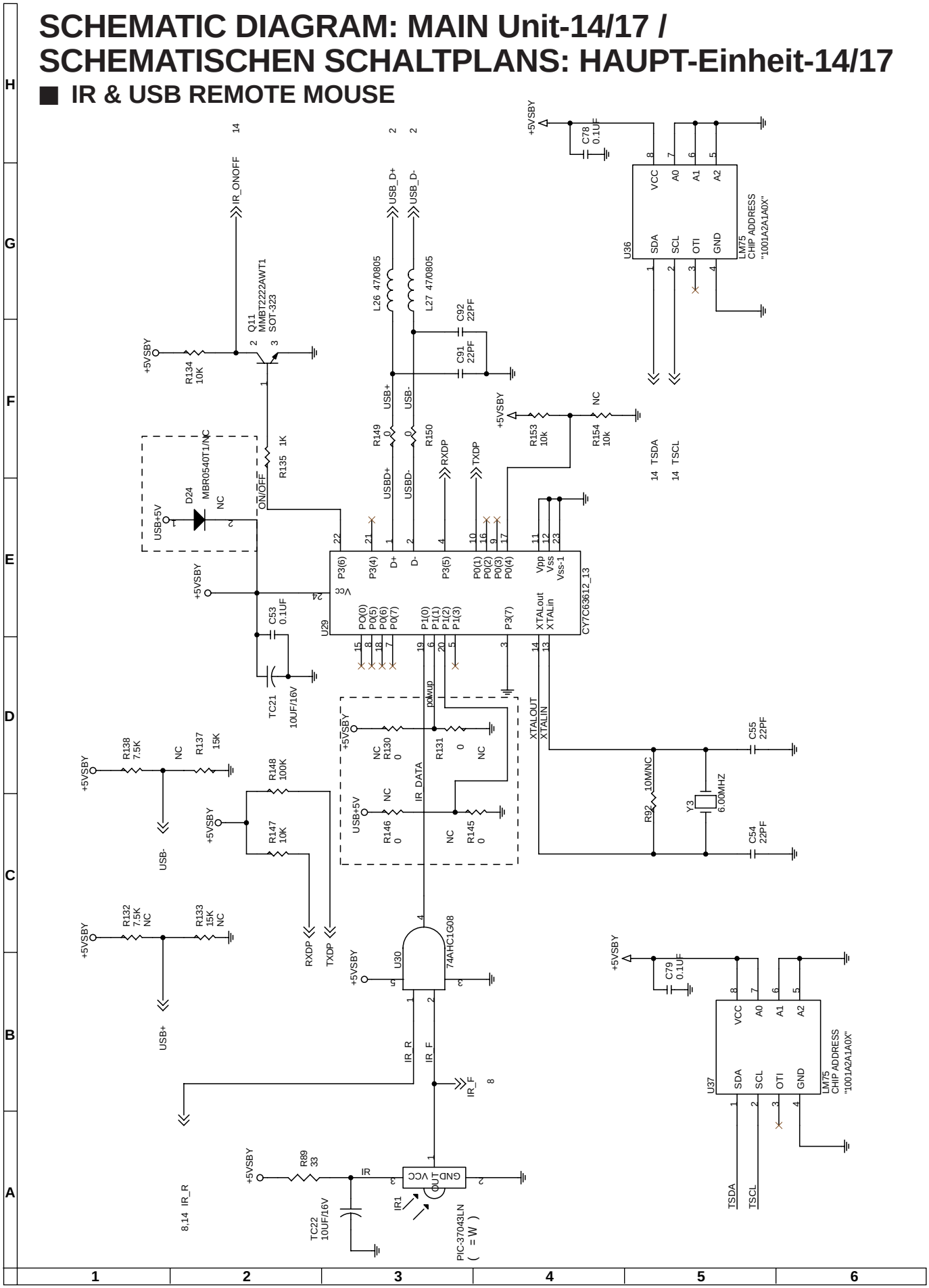
SCHEMATIC DIAGRAM: MAIN Unit-13/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-13/17

■ OUTPUT CONNECTOR



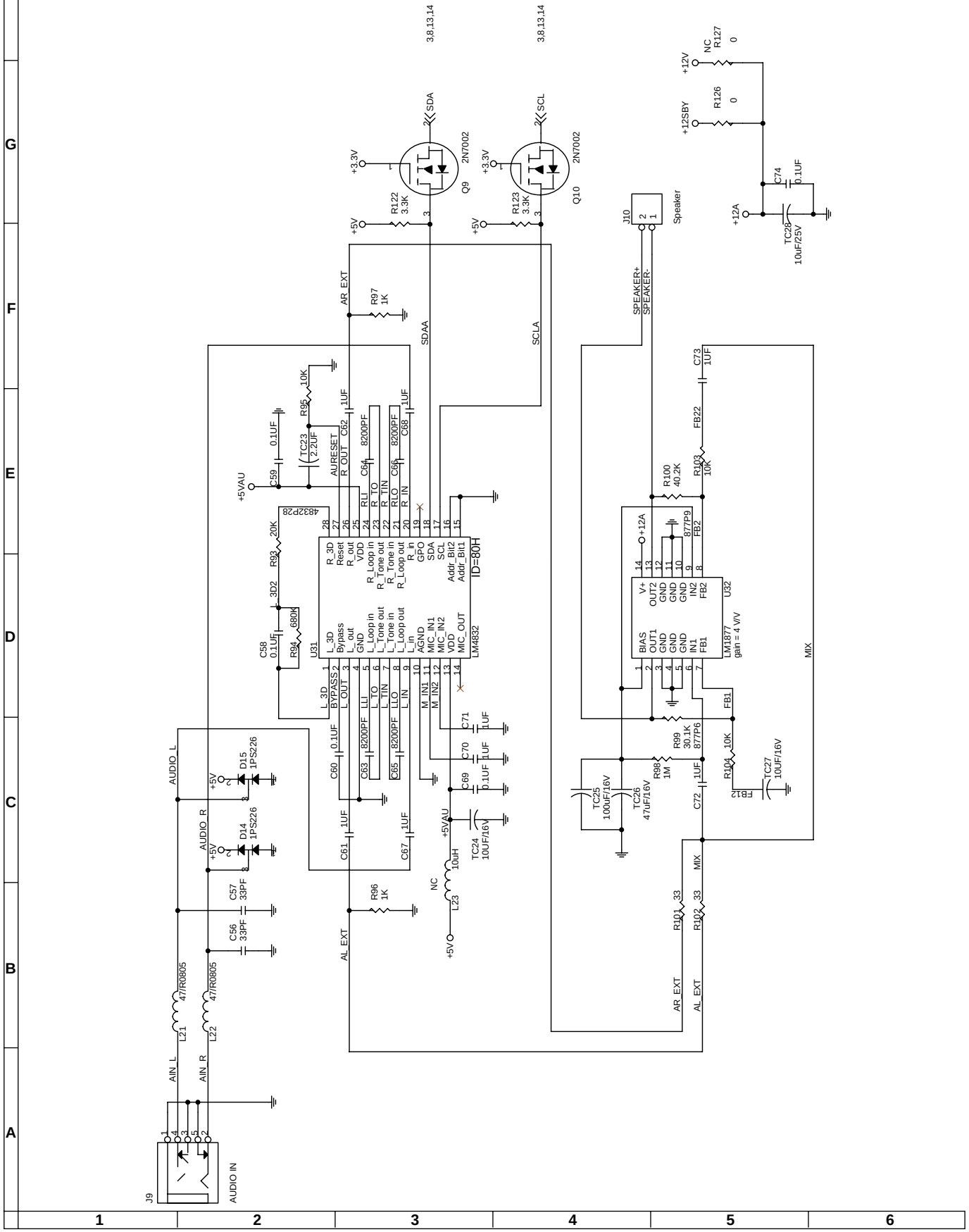
SCHEMATIC DIAGRAM: MAIN Unit-14/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-14/17

■ IR & USB REMOTE MOUSE



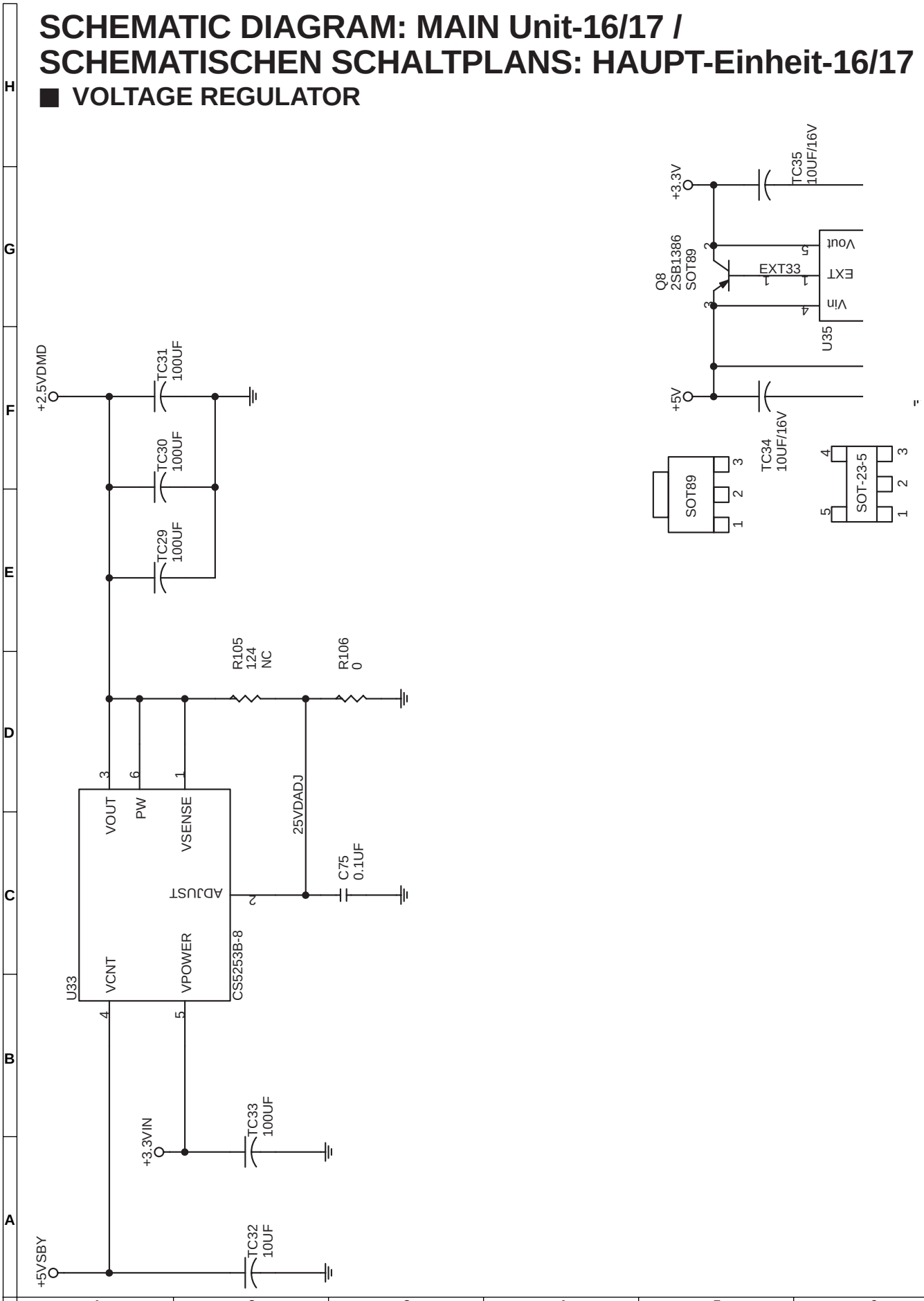
SCHEMATIC DIAGRAM: MAIN Unit-15/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-15/17

■ AUDIO PROCESSING



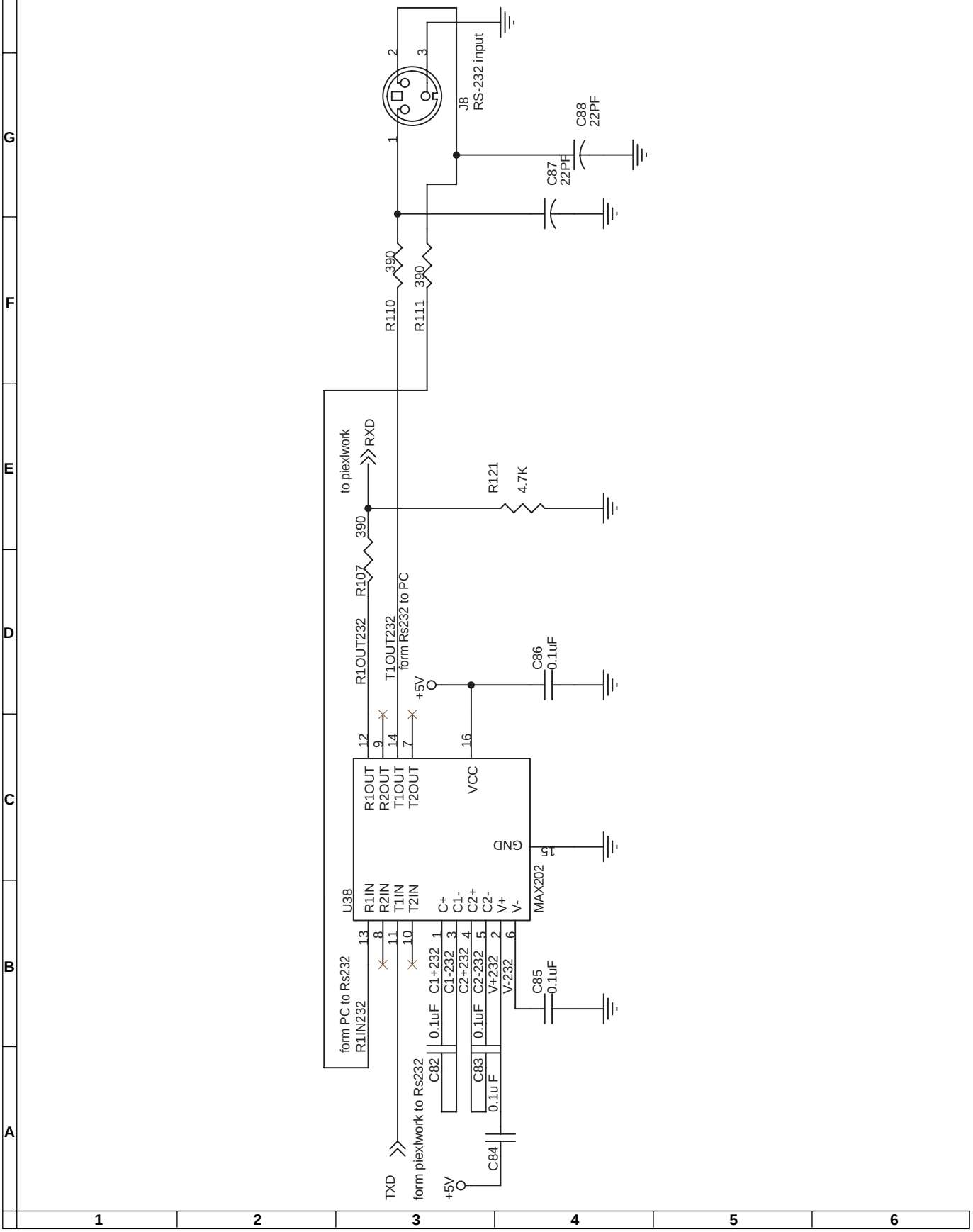
SCHEMATIC DIAGRAM: MAIN Unit-16/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-16/17

■ VOLTAGE REGULATOR



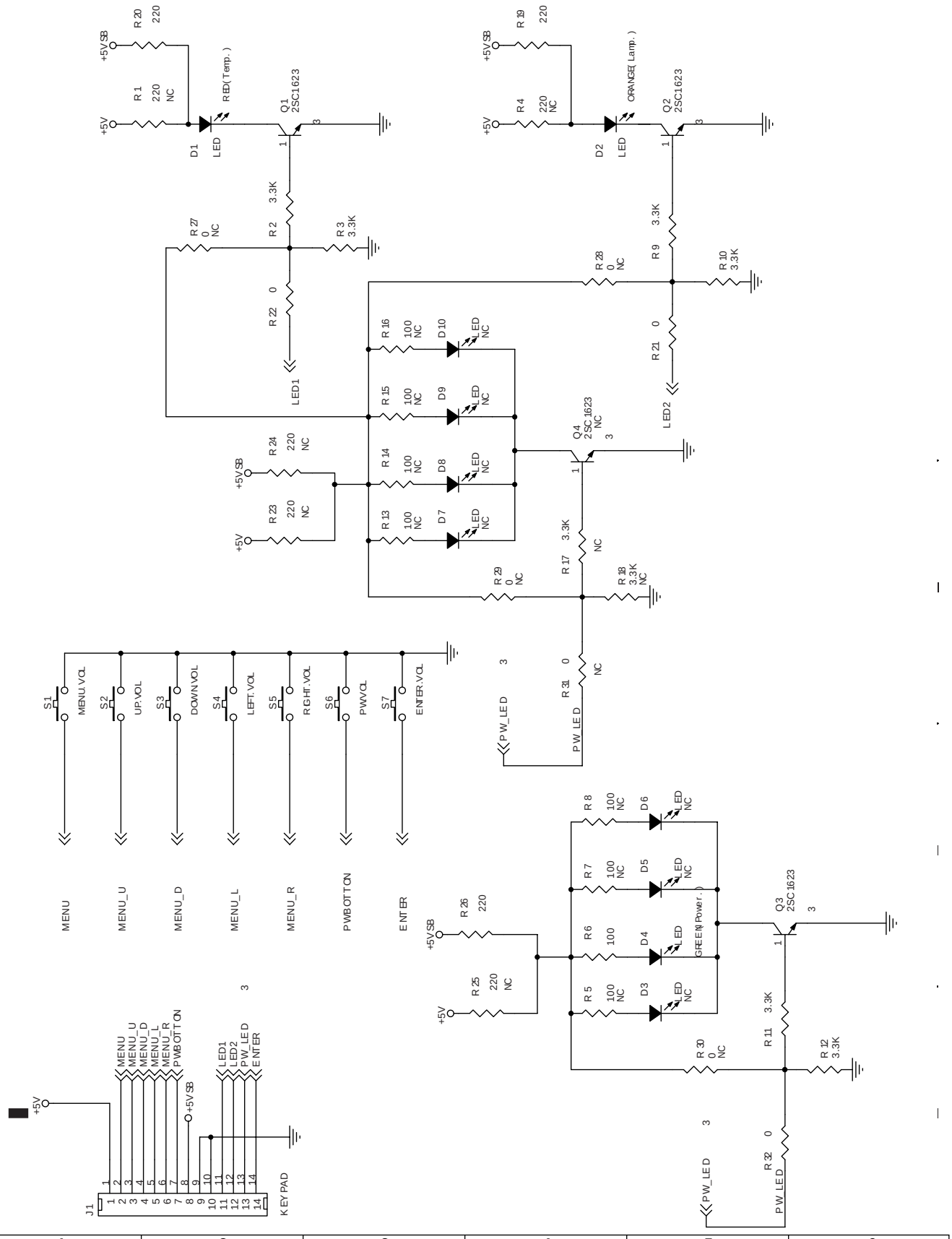
SCHEMATIC DIAGRAM: MAIN Unit-17/17 / SCHEMATISCHEN SCHALTPLANS: HAUPT-Einheit-17/17

■ RS232 PORT



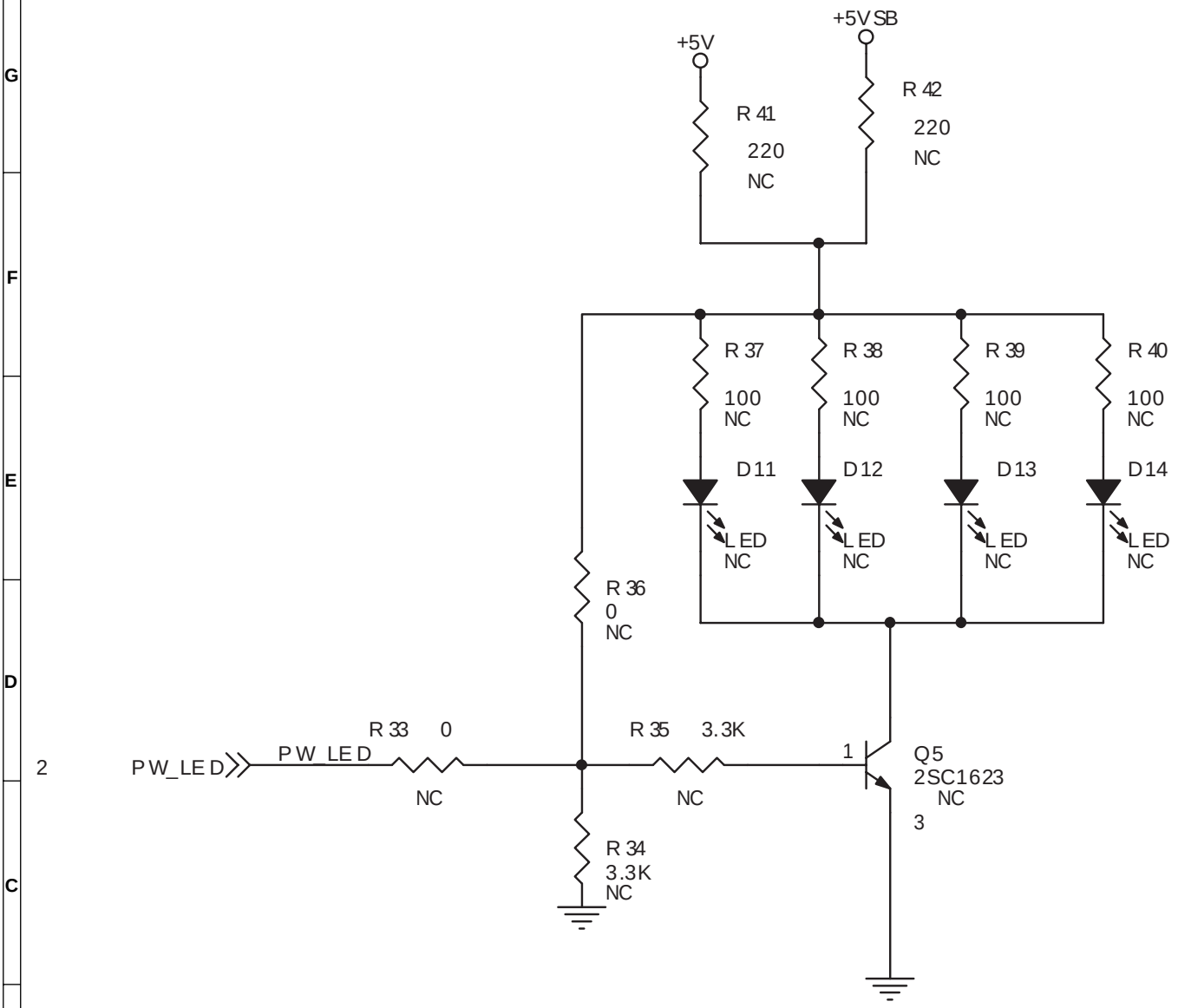
SCHEMATIC DIAGRAM: KEY PAD Unit-1/2 / SCHEMATISCHEN SCHALTPLANS: -Einheit-1/2

■ KEYPAD1



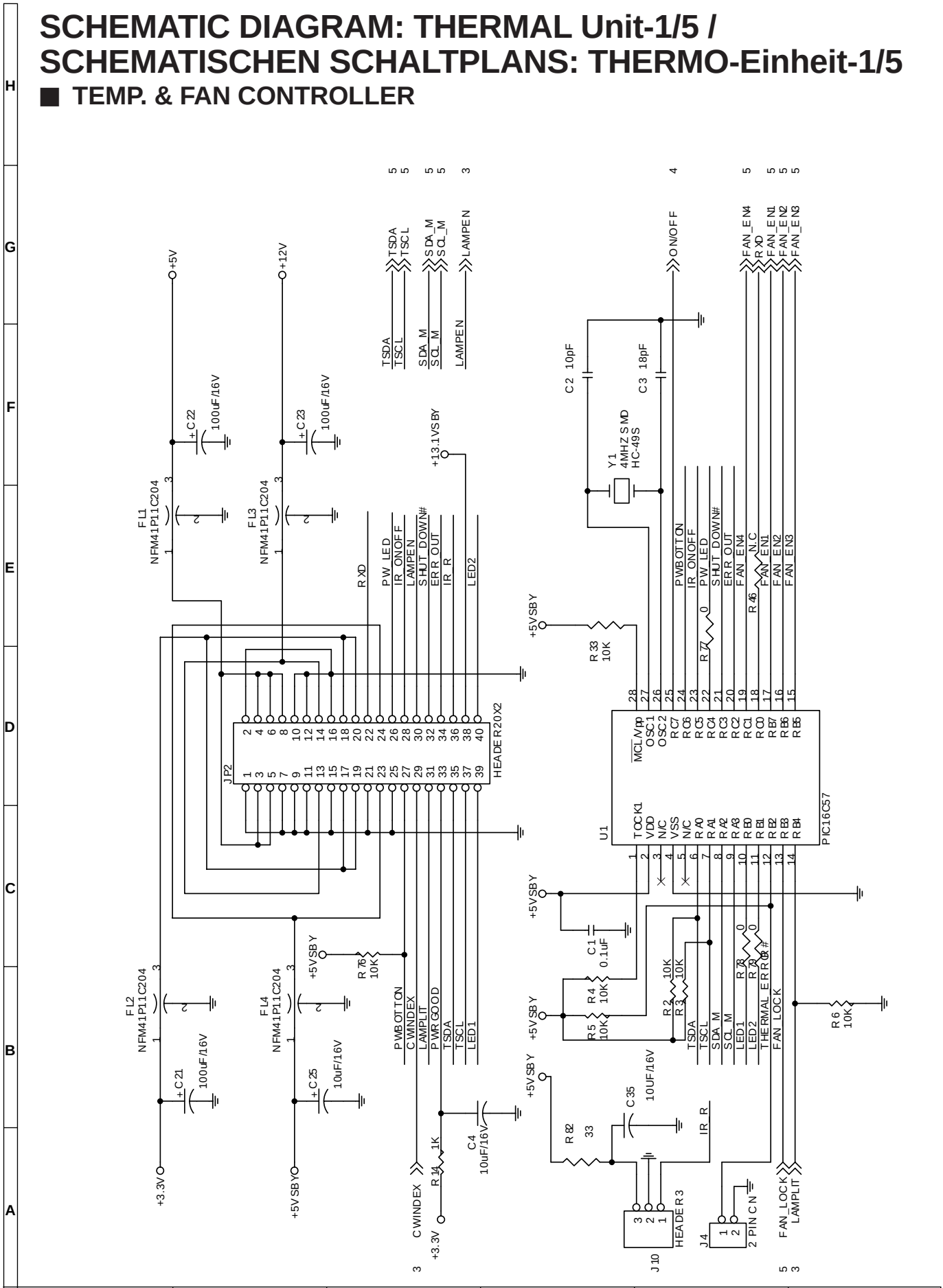
SCHEMATIC DIAGRAM: KEY PAD Unit-2/2 / SCHEMATISCHEN SCHALTPLANS: -Einheit-2/2

■ KEYPAD2



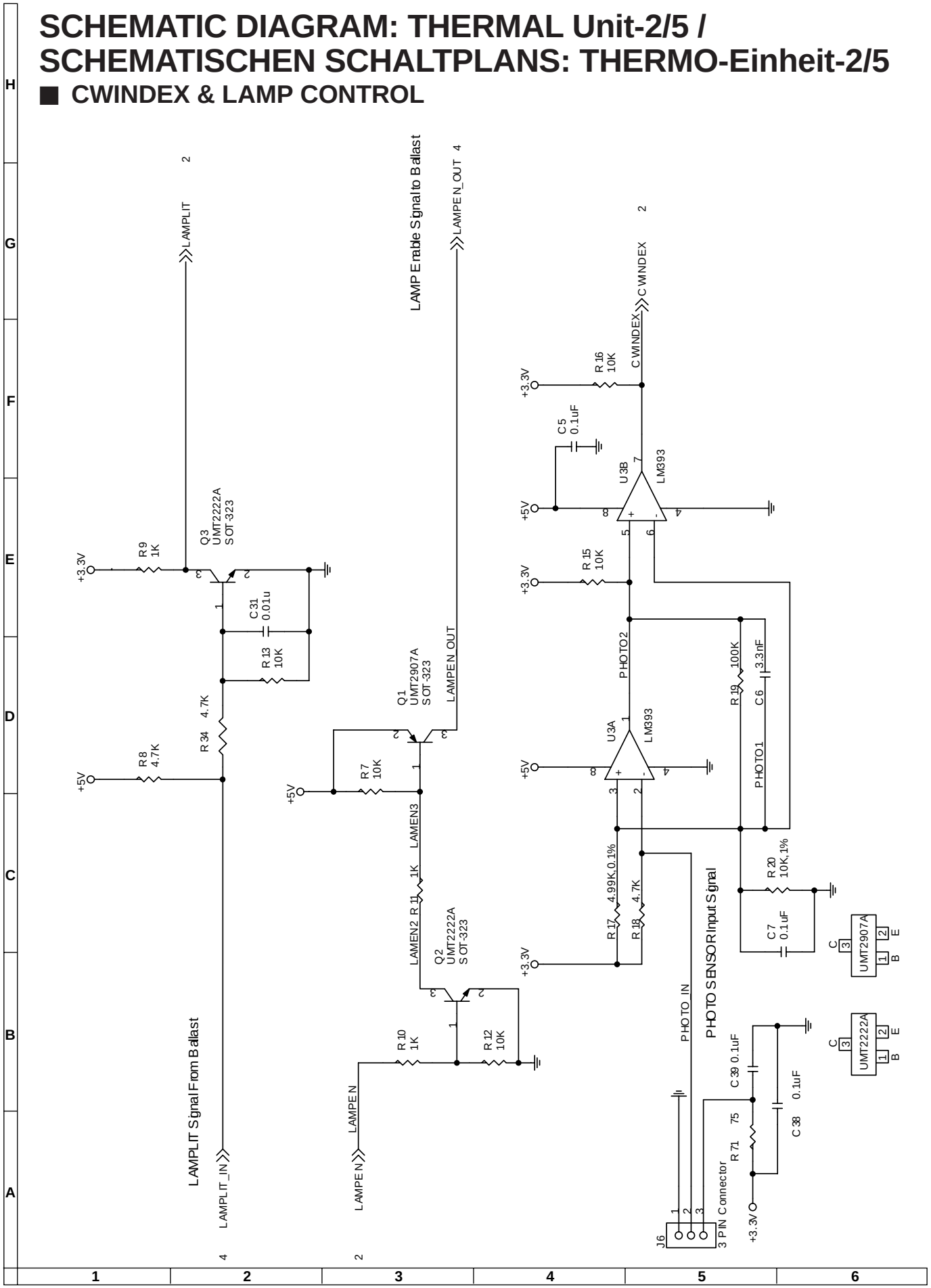
SCHEMATIC DIAGRAM: THERMAL Unit-1/5 / SCHEMATISCHEN SCHALTPLANS: THERMO-Einheit-1/5

■ TEMP. & FAN CONTROLLER



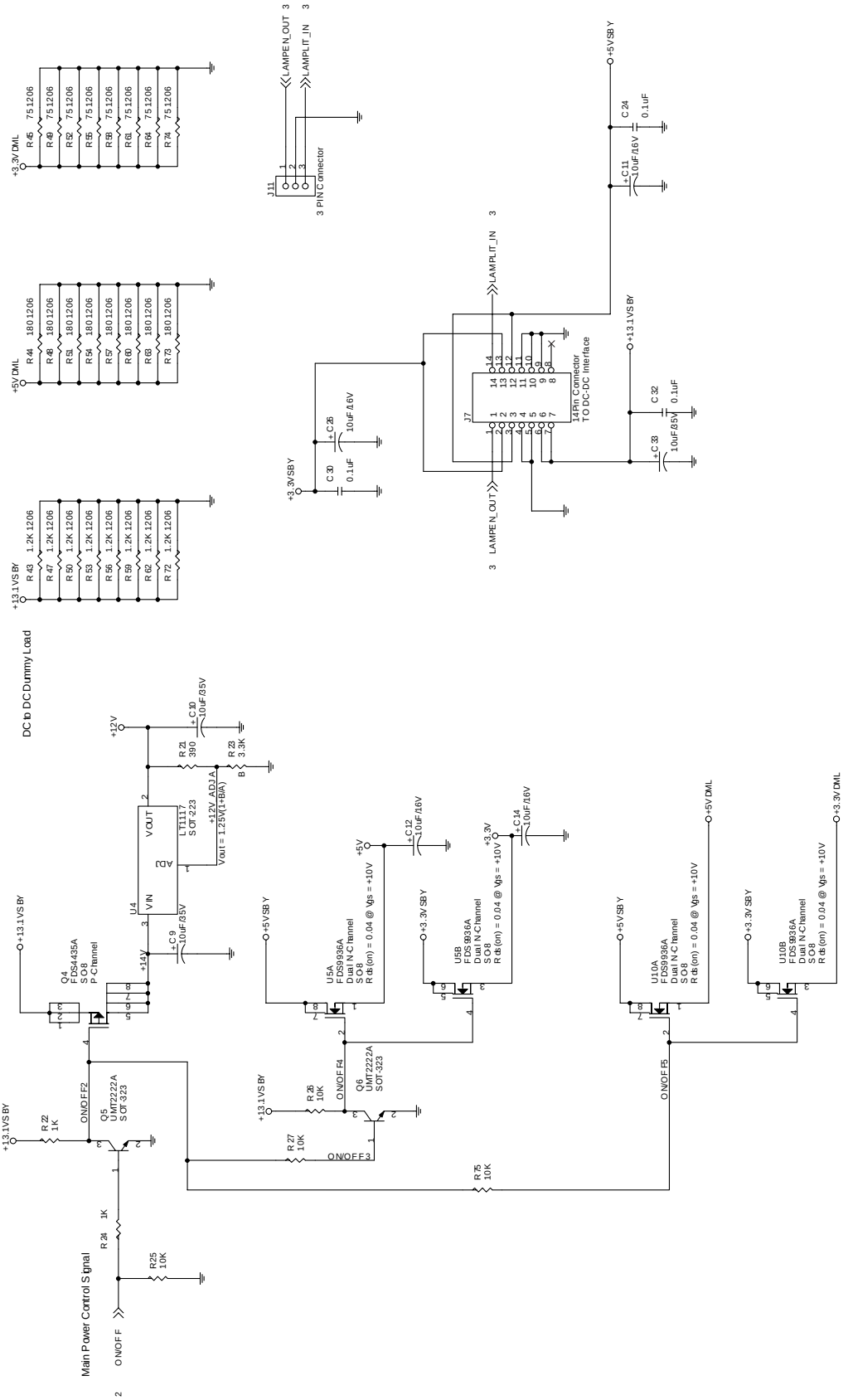
SCHEMATIC DIAGRAM: THERMAL Unit-2/5 / SCHEMATISCHEN SCHALTPLANS: THERMO-Einheit-2/5

■ CWINDEX & LAMP CONTROL



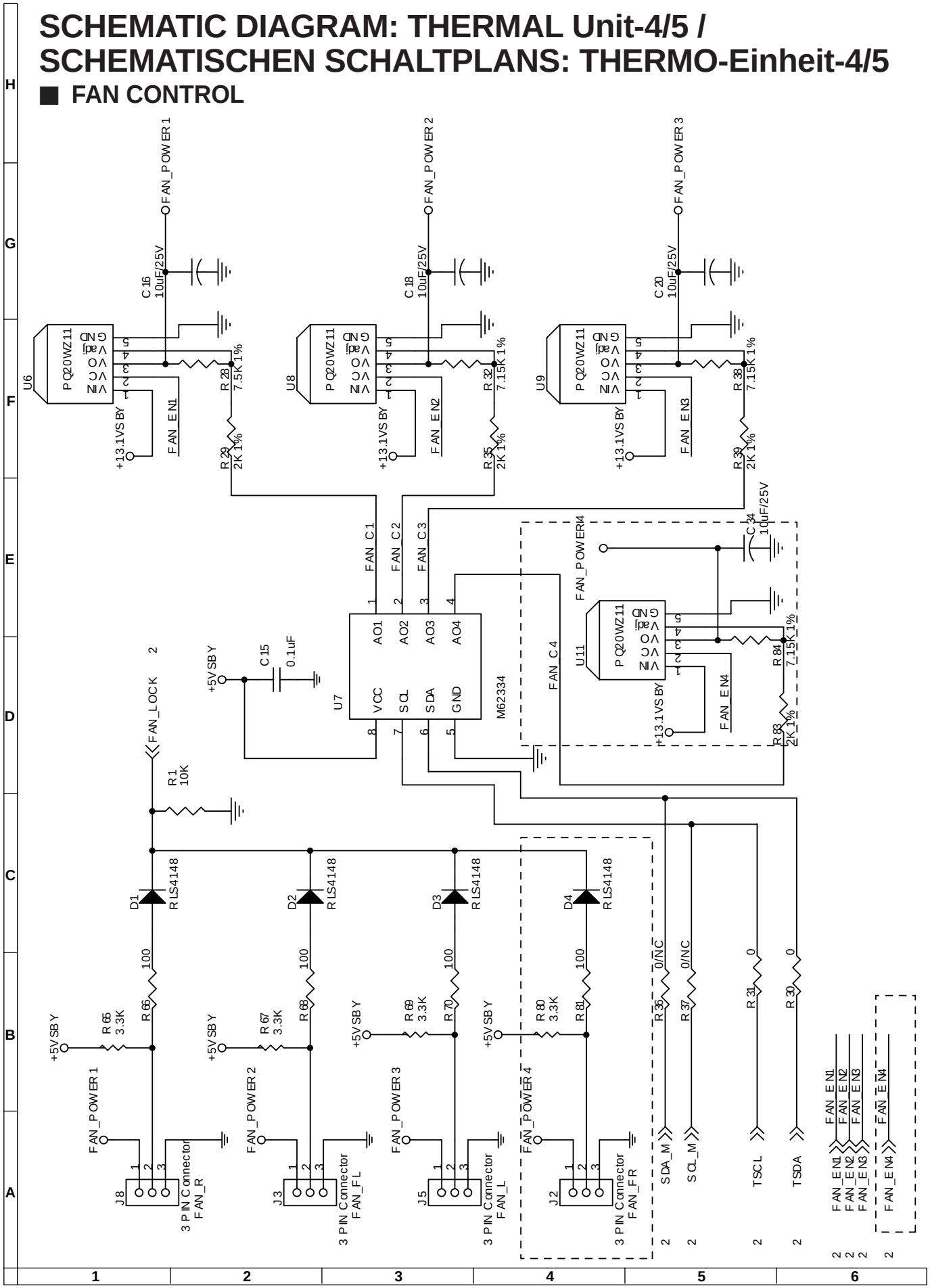
SCHEMATIC DIAGRAM: THERMAL Unit-3/5 / SCHEMATISCHEN SCHALTPLANS: THERMO-Einheit-3/5

■ MAIN POWER CONTROL



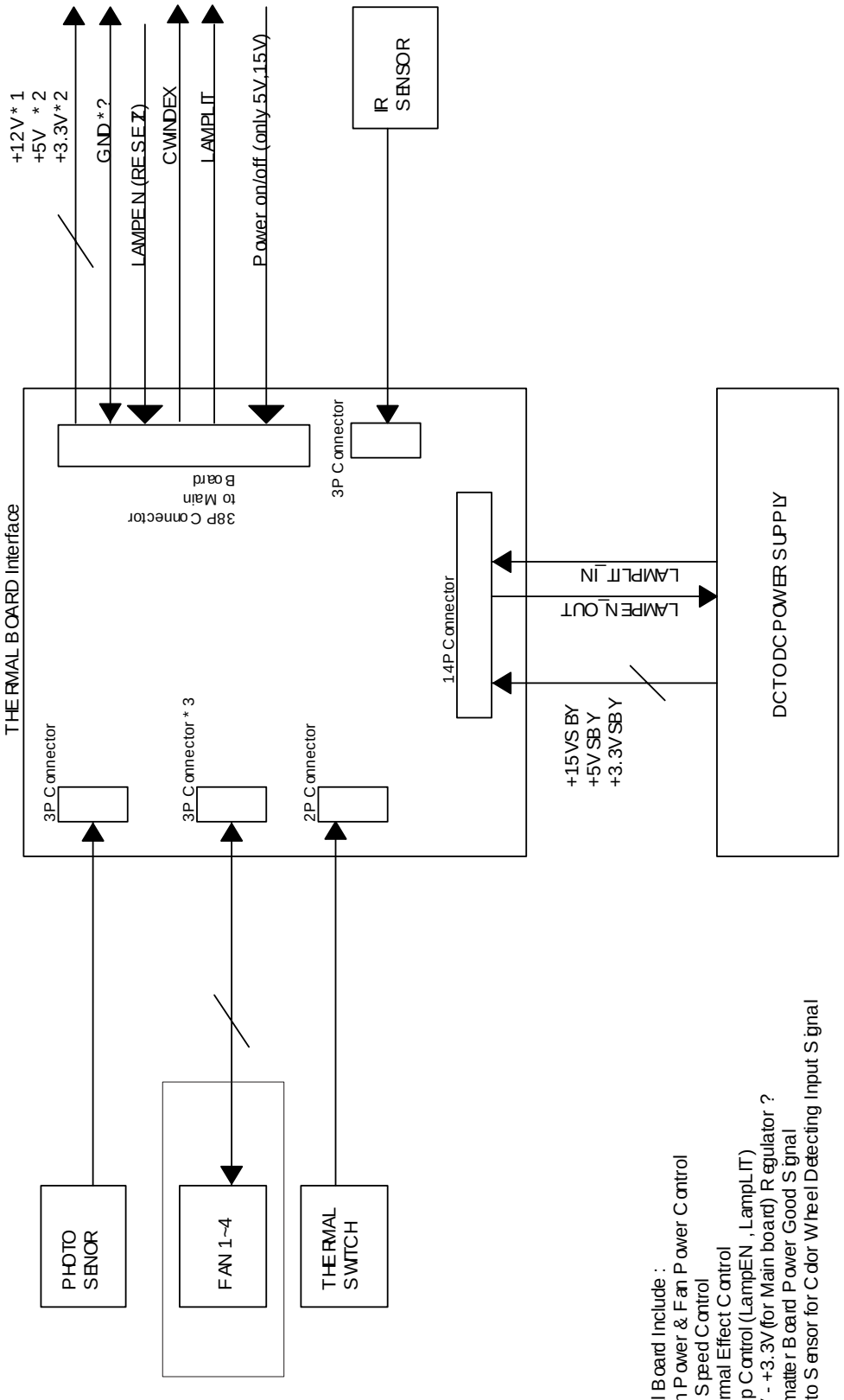
SCHEMATIC DIAGRAM: THERMAL Unit-4/5 / SCHEMATISCHEN SCHALTPLANS: THERMO-Einheit-4/5

■ FAN CONTROL



SCHEMATIC DIAGRAM: THERMAL Unit-5/5 / SCHEMATISCHEN SCHALTPLANS: THERMO-Einheit-5/5

■ CONNECTOR INTERFACE DIAGRAM

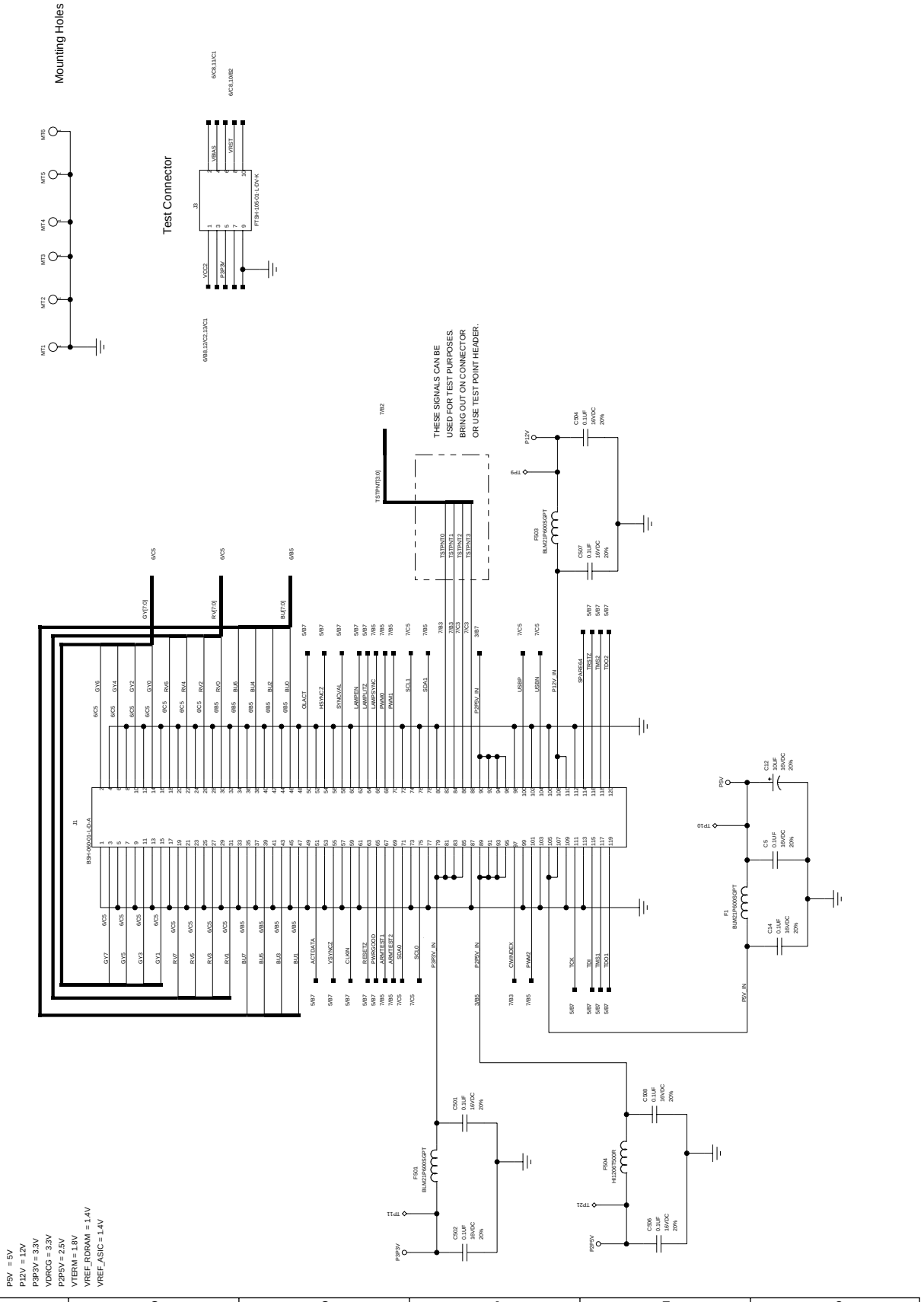


Thermal Board Include :

1. Main Power & Fan Power Control
2. Fan Speed Control
3. Thermal Effect Control
4. Lamp Control (LampEN , LampLIT)
5. +5V - +3.3V (for Main board) Regulator ?
6. Formatter Board Power Good Signal
7. Photo Sensor for Color Wheel Detecting Input Signal

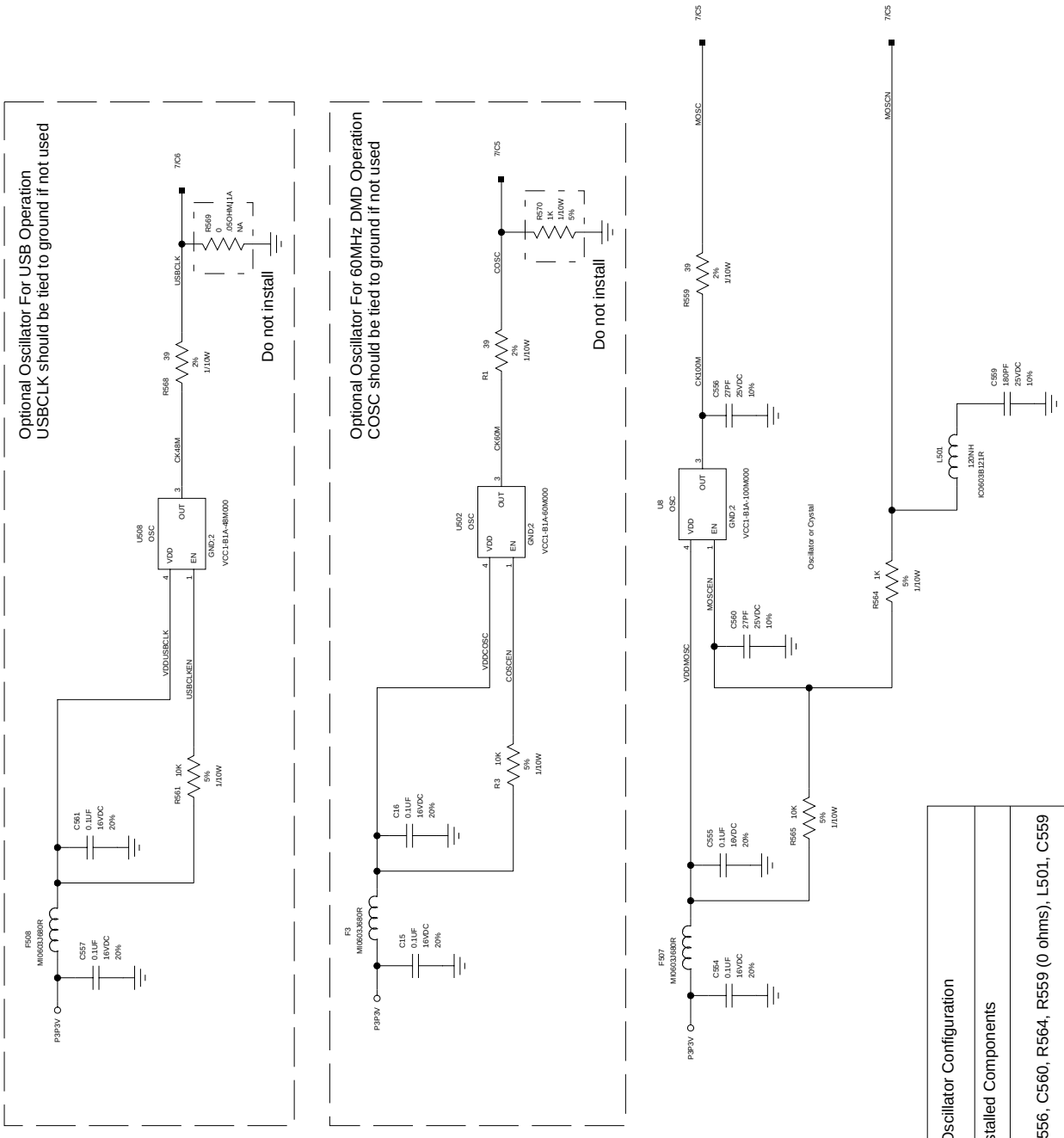
SCHEMATIC DIAGRAM: FORMATTER Unit-1/11 /

■ CONNECTORS



SCHEMATIC DIAGRAM: FORMATTER Unit-2/11 /

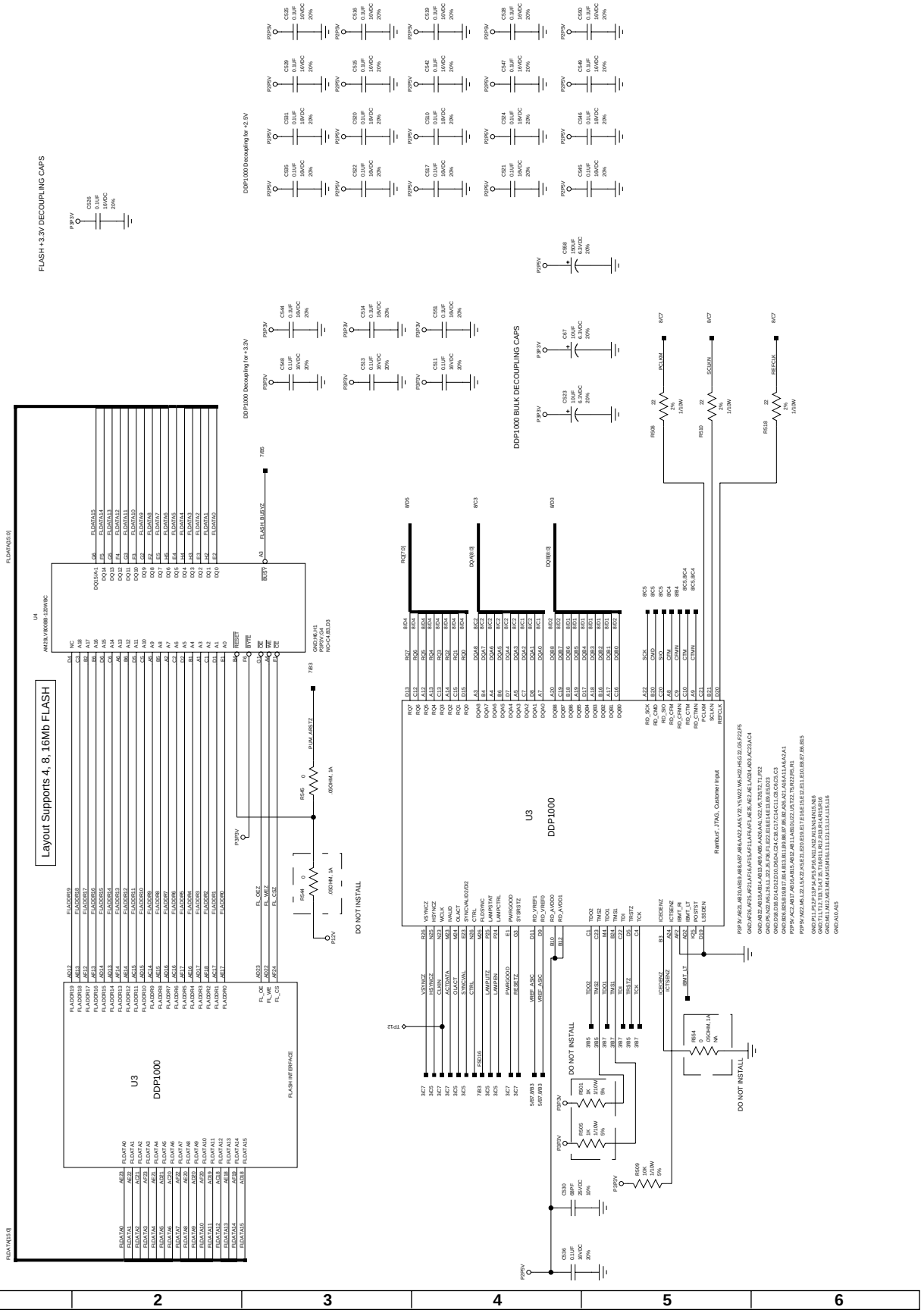
■ CLOCK GENERATION



MOSC Crystal/Oscillator Configuration		
	Installed Components	
Crystal	U8 (Crystal), C556, C560, R564, R559 (0 ohms), L501, C559	
Oscillator	U8 (Oscillator), F507, C554, C555, R565, R559 (39.2 ohms)	

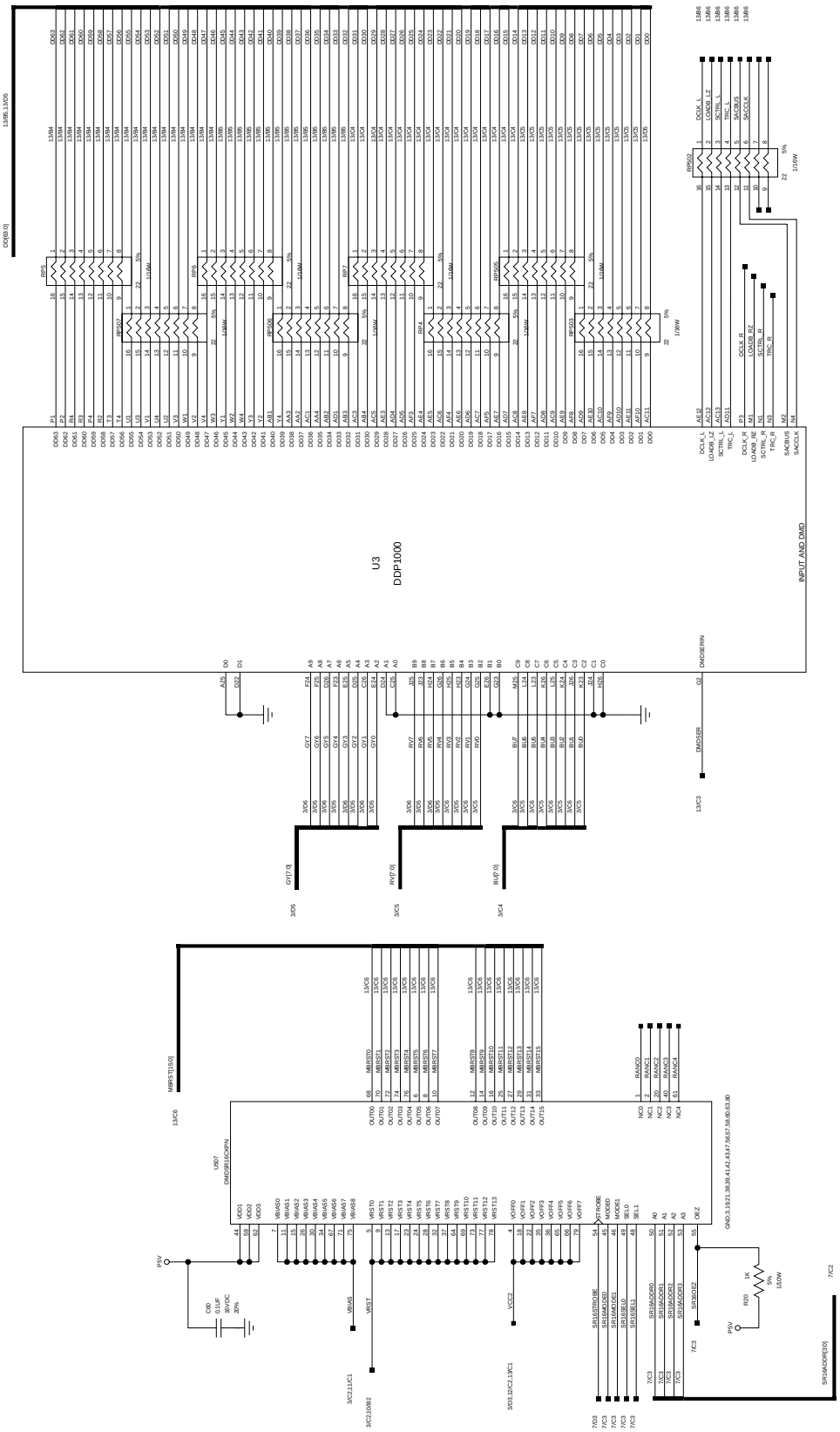
SCHEMATIC DIAGRAM: FORMATTER Unit-3/11 /

■ DDP1000, Flash



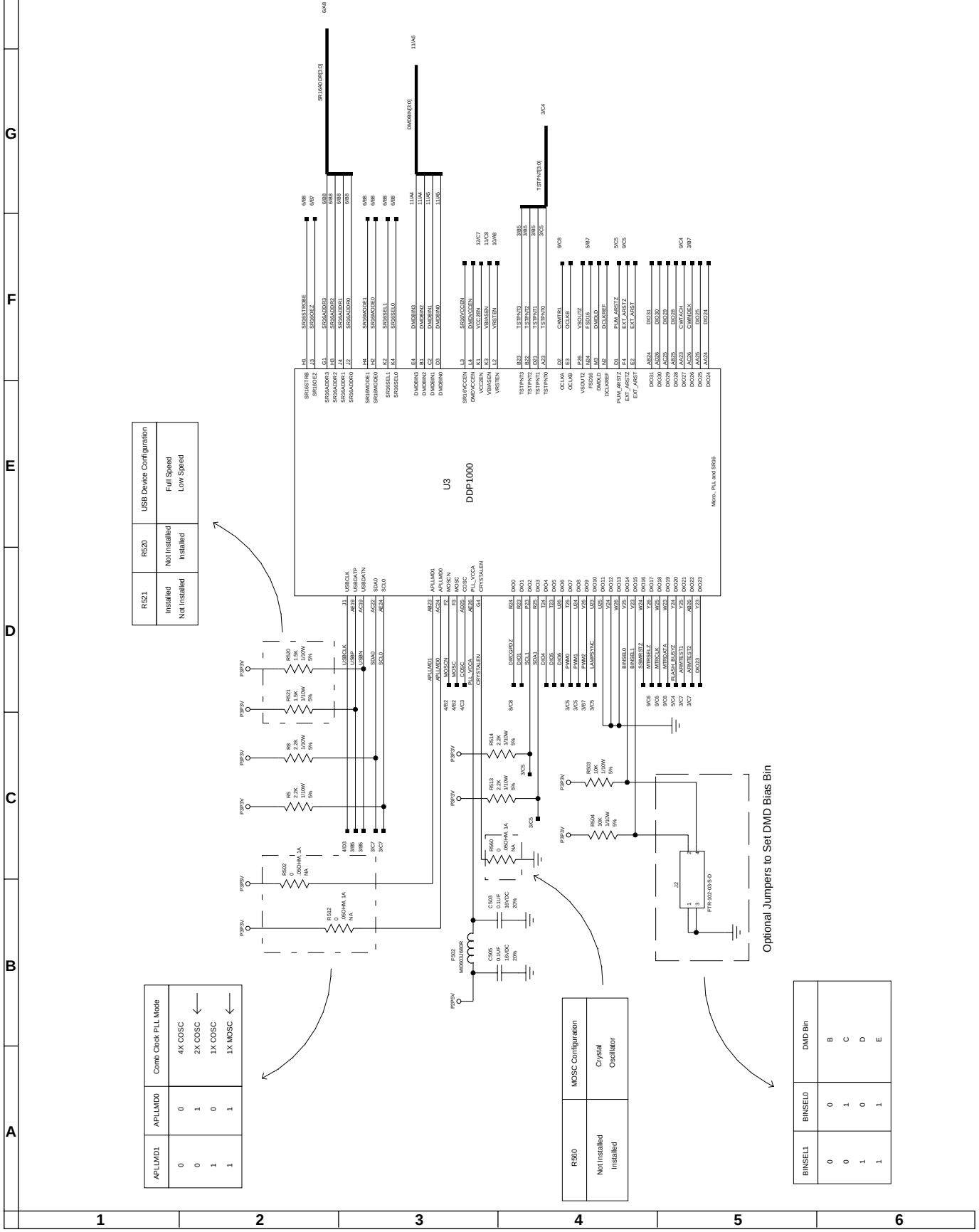
SCHEMATIC DIAGRAM: FORMATTER Unit-4/11 /

■ DDP1000, RESET ASIC



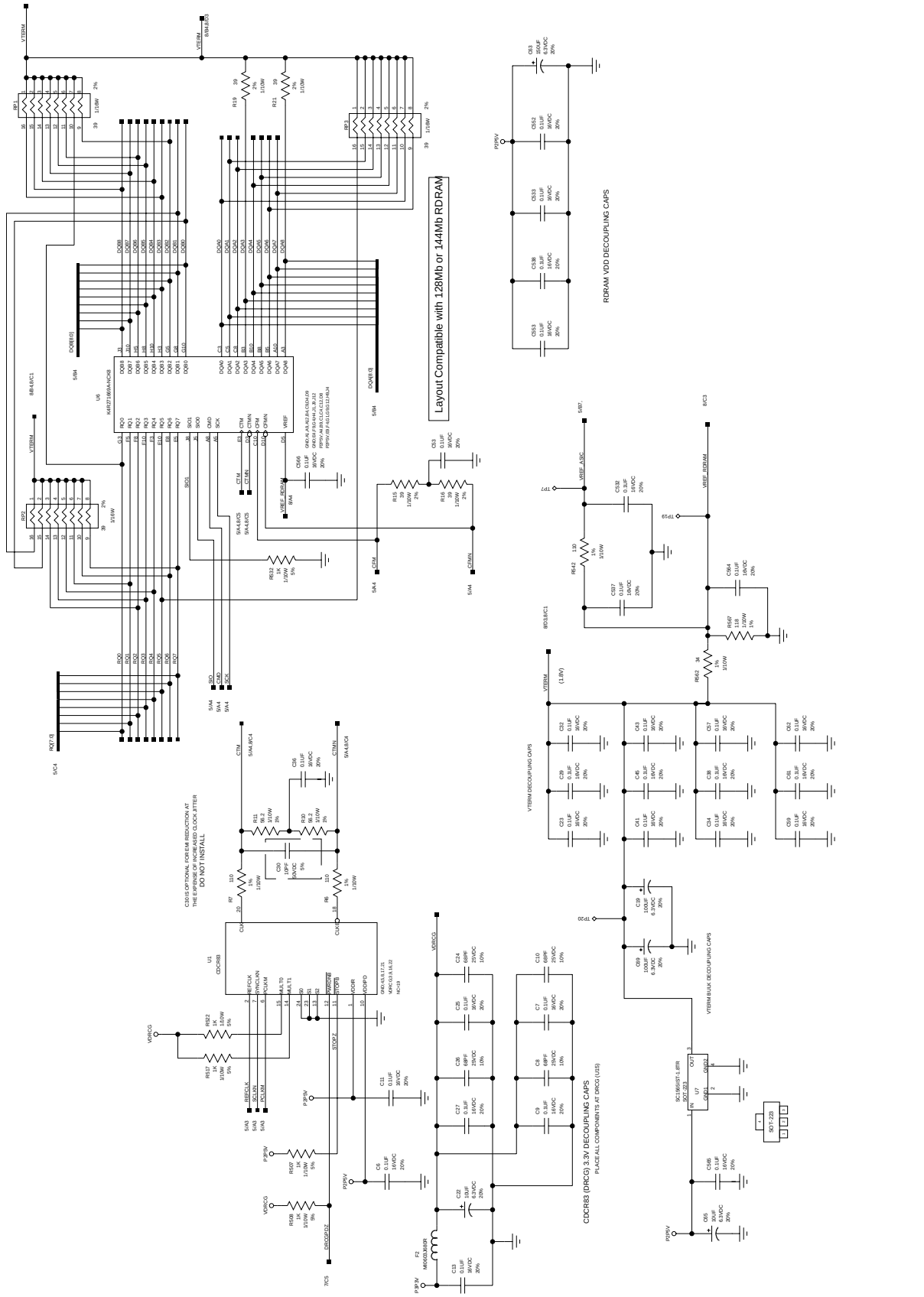
SCHEMATIC DIAGRAM: FORMATTER Unit-5/11 /

■ DDP1000, Micr, PLL



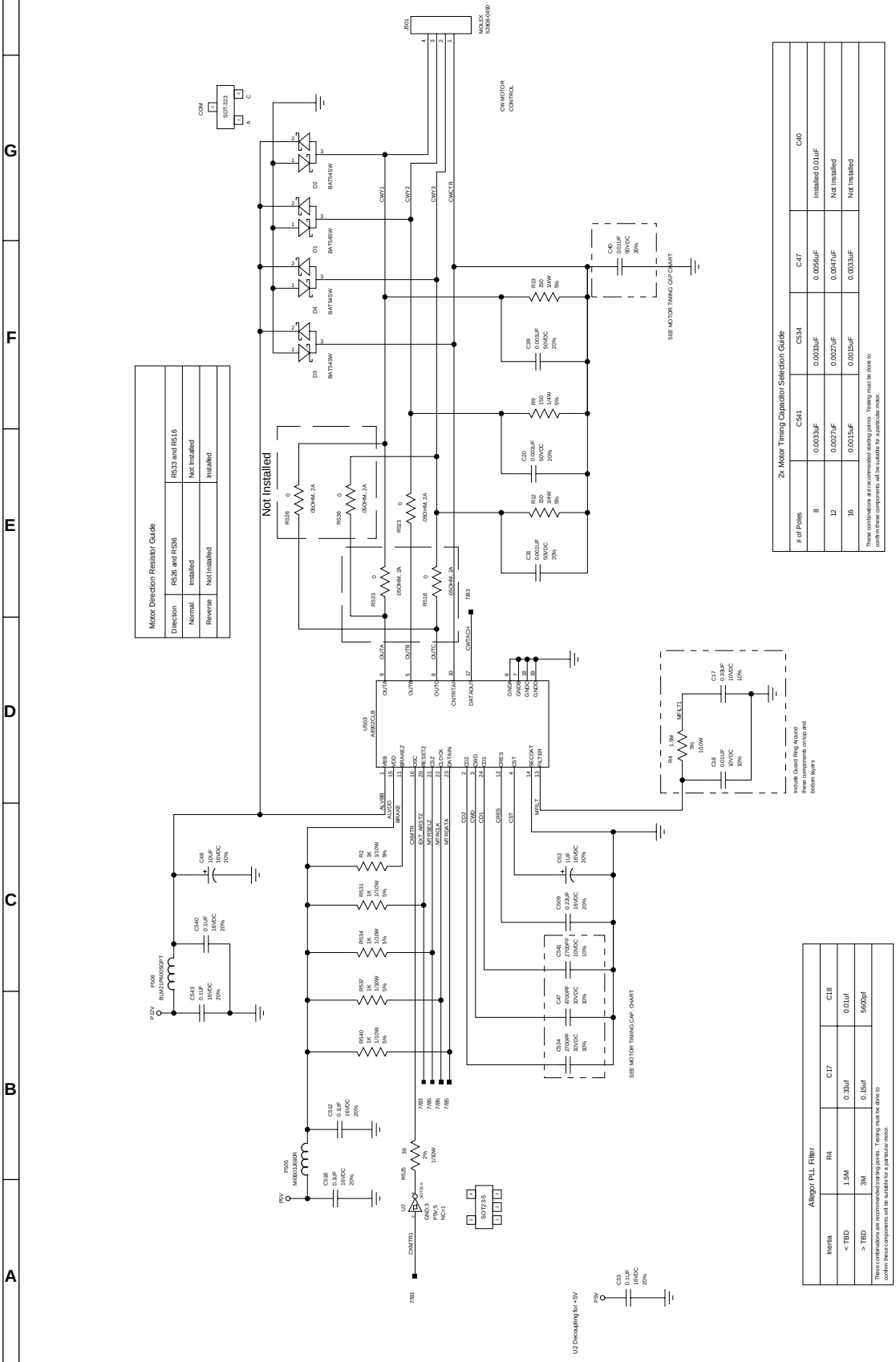
SCHEMATIC DIAGRAM: FORMATTER Unit-6/11 /

■ RAMBUS™



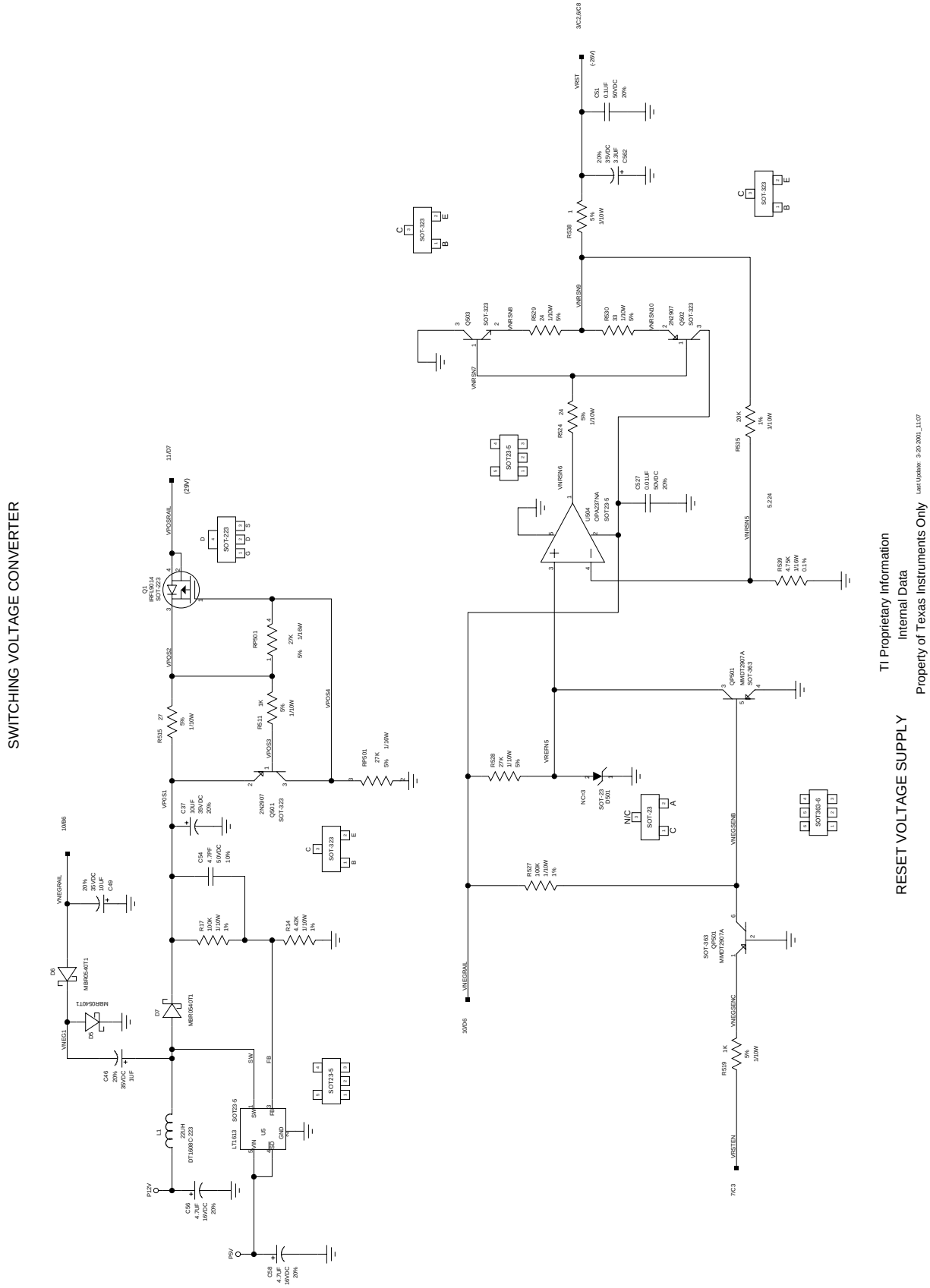
SCHEMATIC DIAGRAM: FORMATTER Unit-7/11 /

■ COLOR WHEEL CONTROL



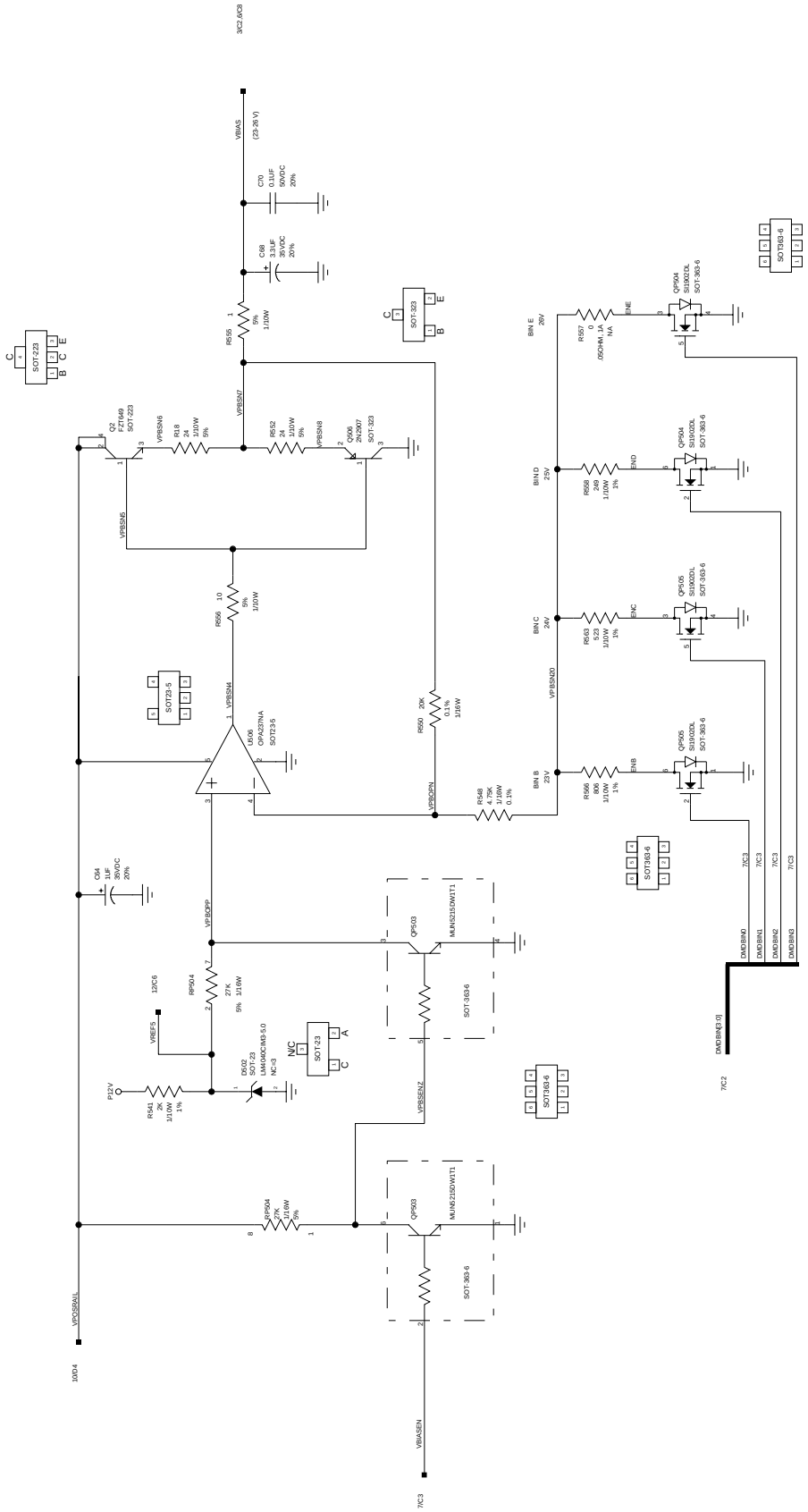
SCHEMATIC DIAGRAM: FORMATTER Unit-8/11 /

■ RESET VOLTAGE SUPPLY



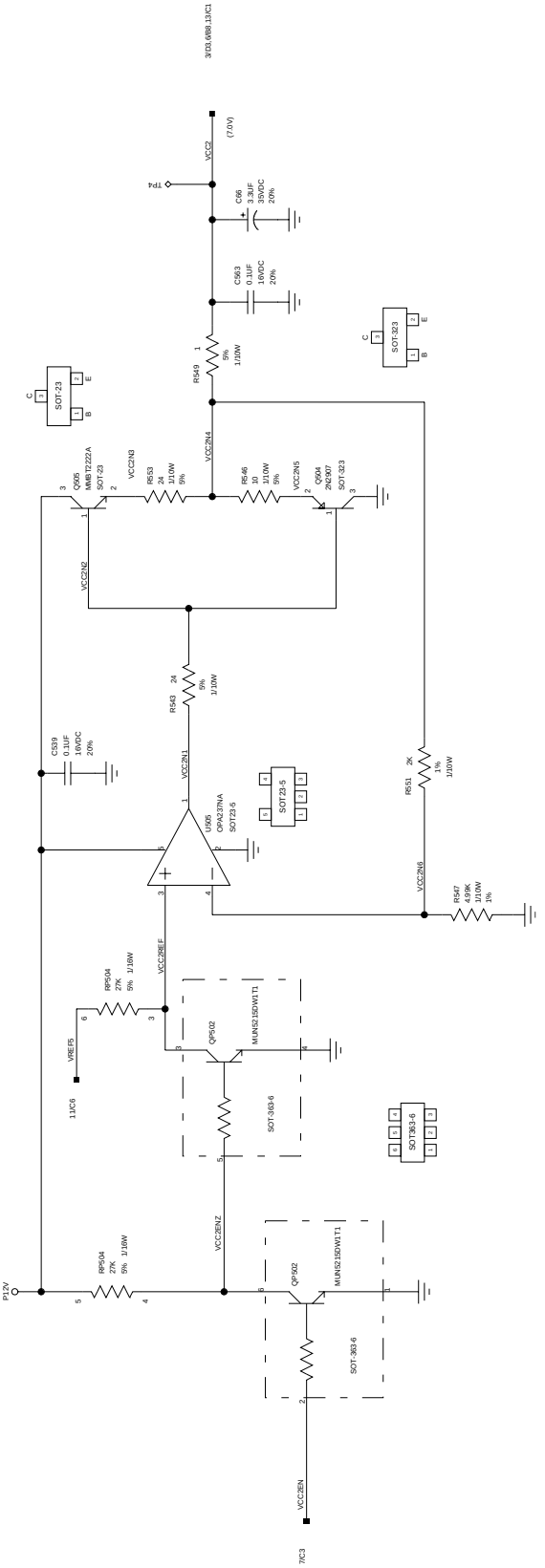
SCHEMATIC DIAGRAM: FORMATTER Unit-9/11 /

■ POSITIVE BIAS GENERATION



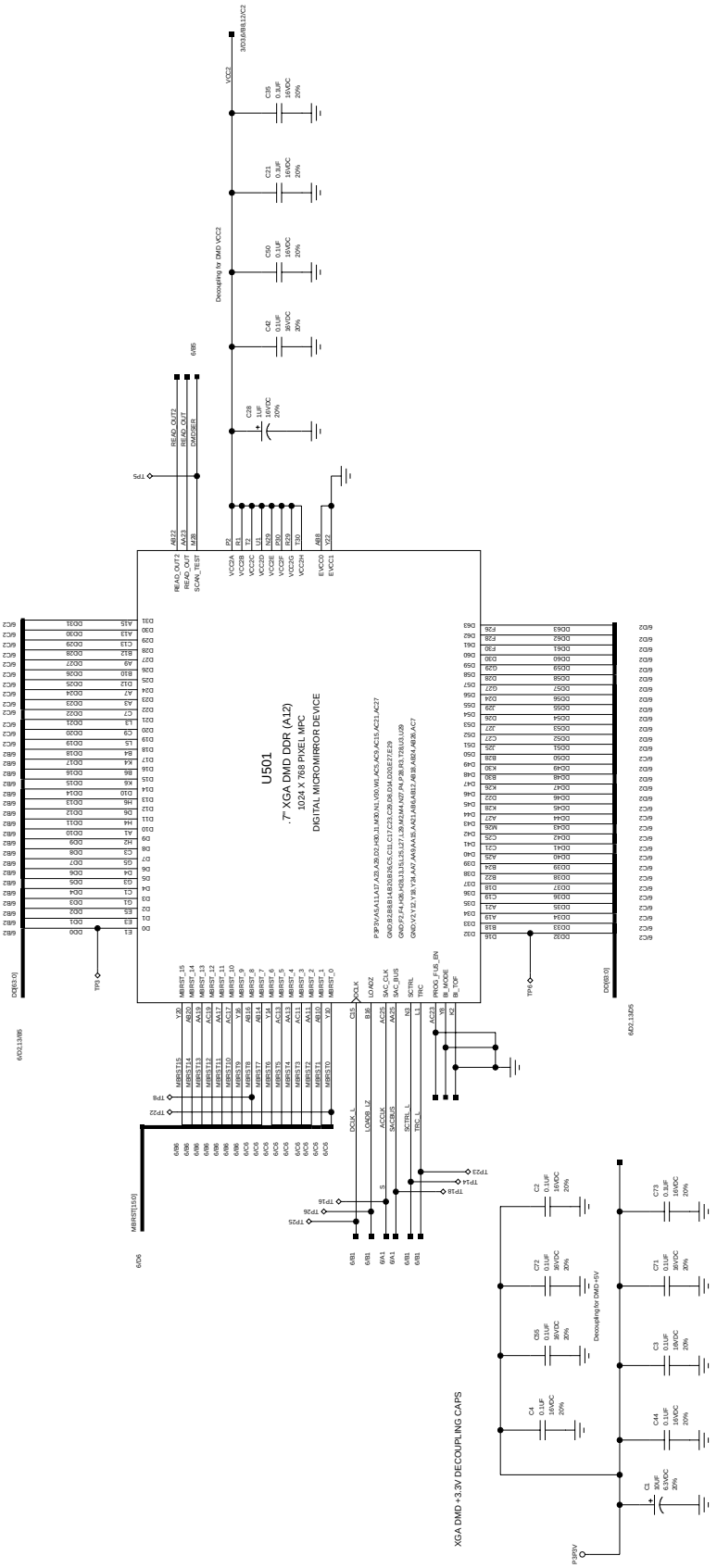
SCHEMATIC DIAGRAM: FORMATTER Unit-10/11 /

■ VCC2 VOLTAGE SUPPLY

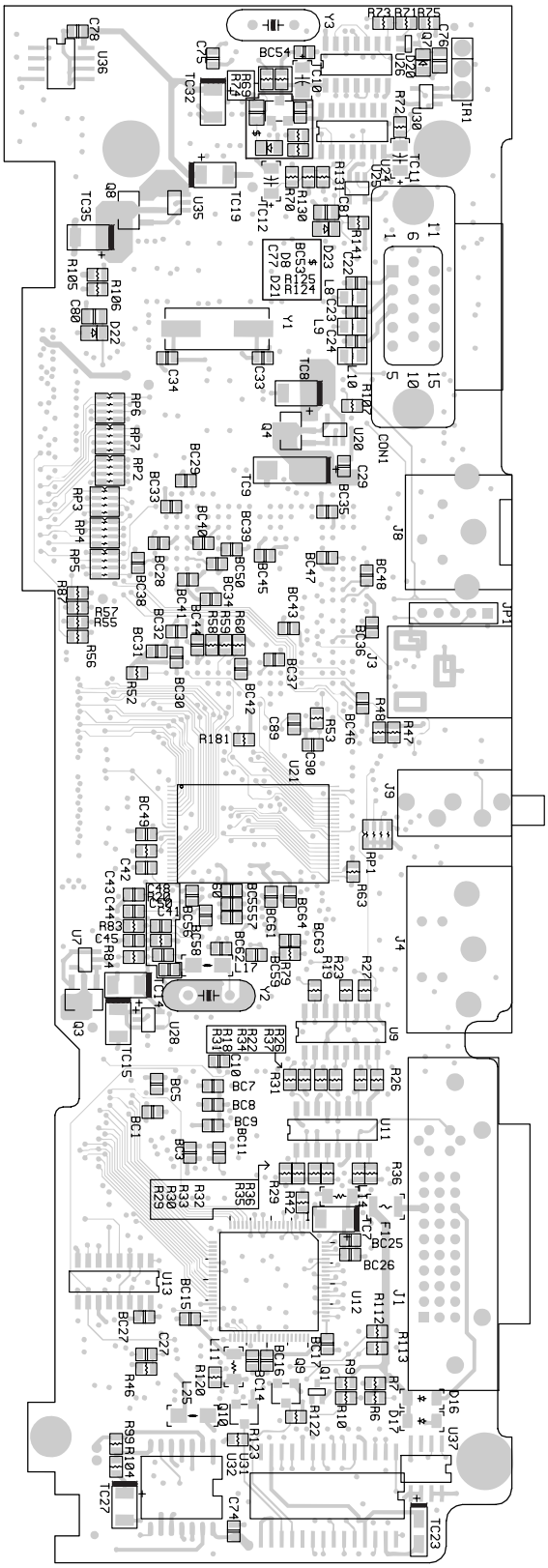


SCHEMATIC DIAGRAM: FORMATTER Unit-11/11 /

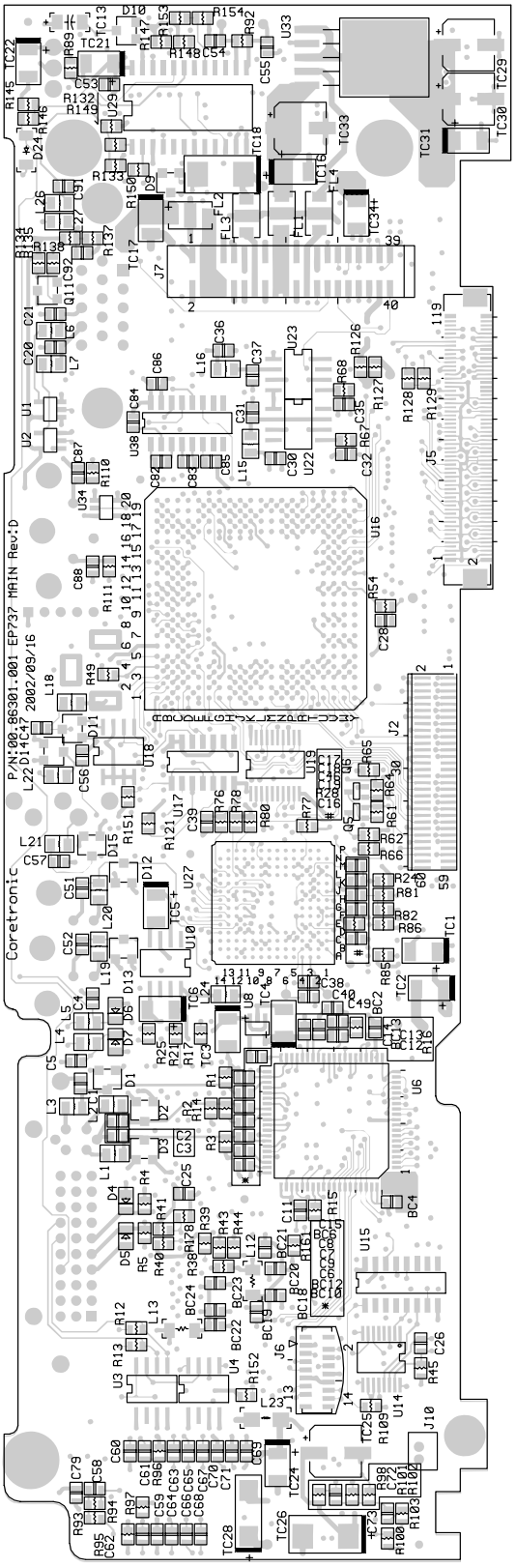
■ XGA DMD



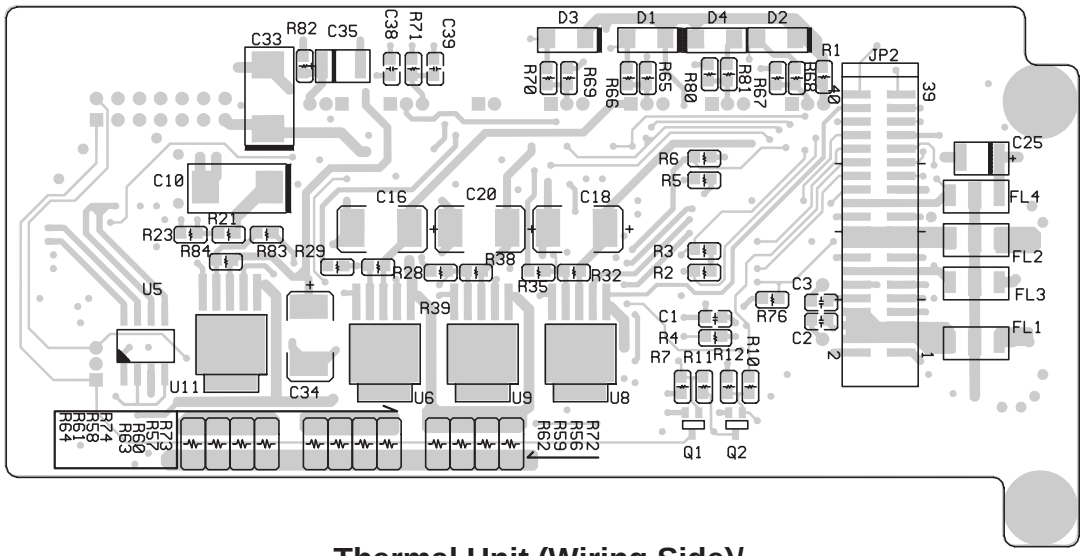
PRINTED WIRING BOARD ASSEMBLIES / LEITERPLATTENINHEITIN



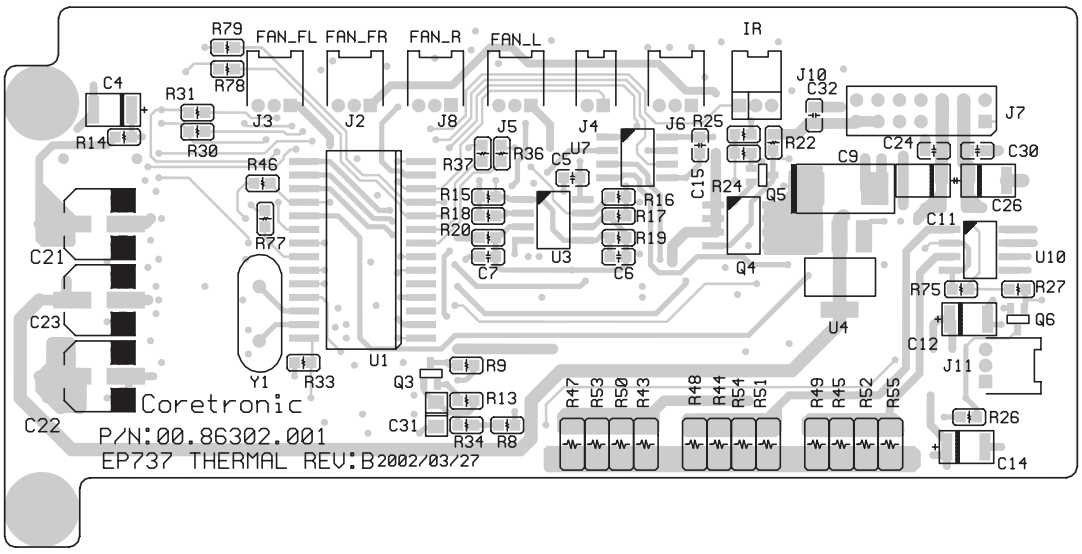
Main Unit (Wiring Side) / Haupteinheit (Leiterbahnseite)



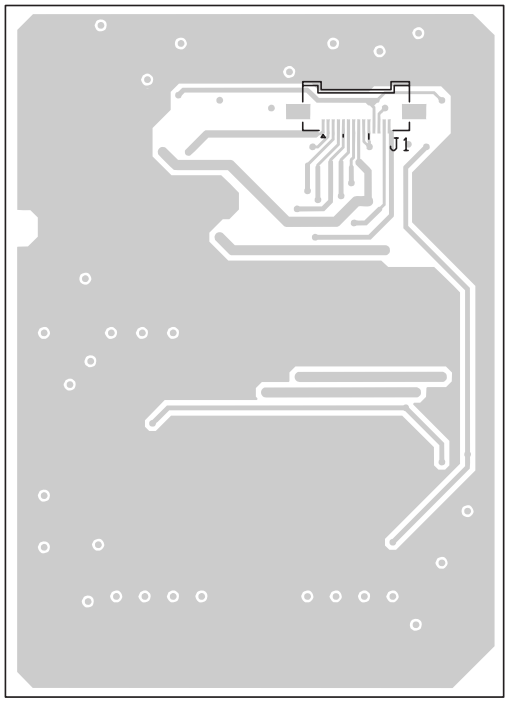
Main Unit (Component Side) / Haupteinheit (Bestückungsseite)



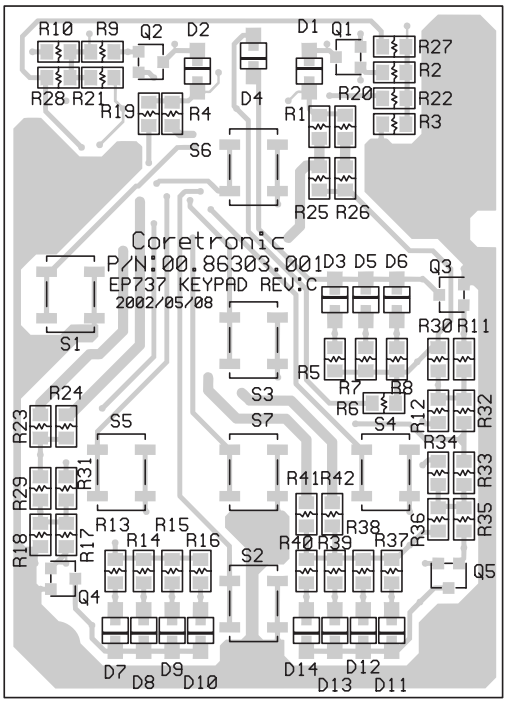
Thermal Unit (Wiring Side)/
Thermoeinheit (Leiterbahnseite)



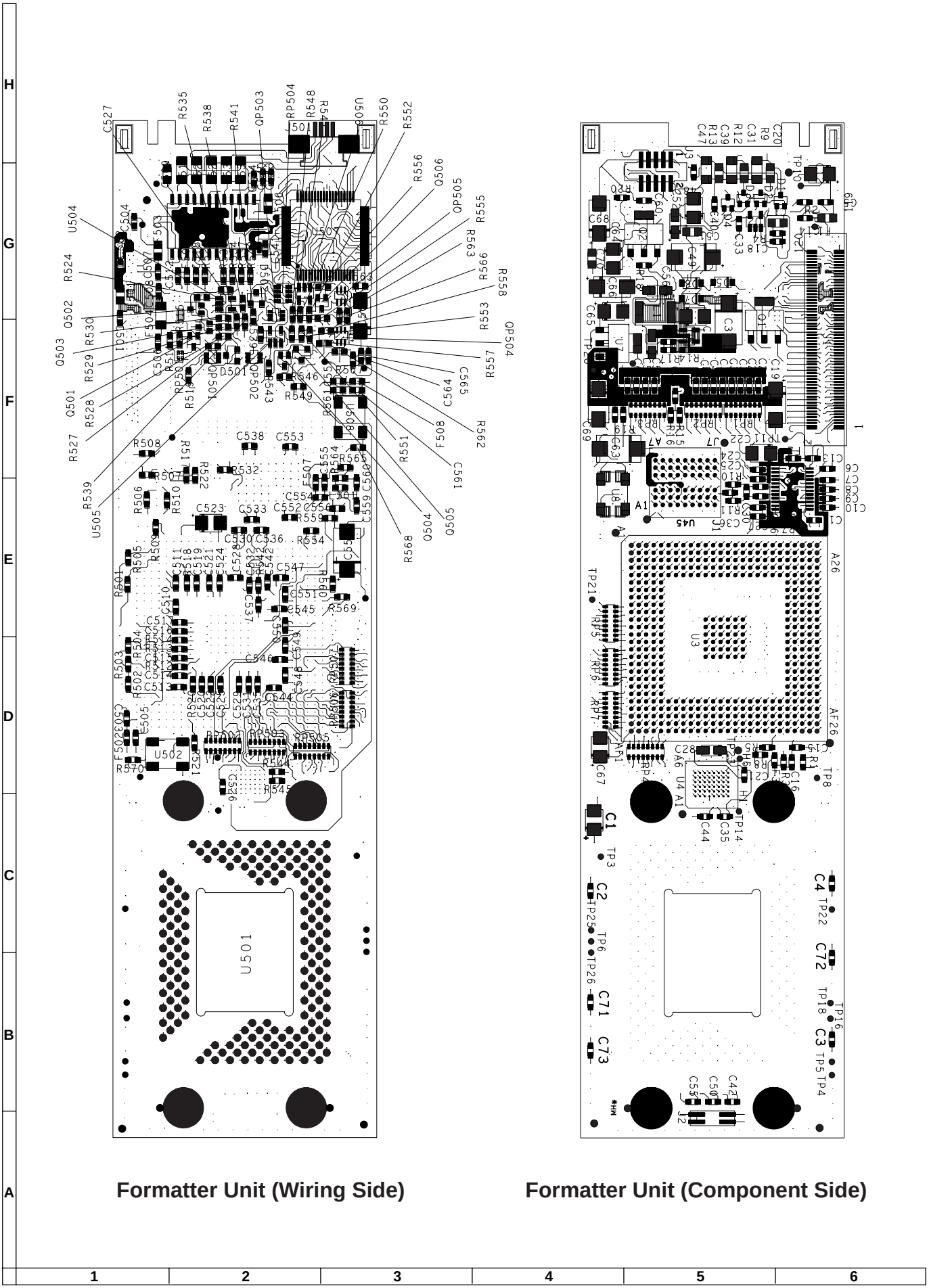
Thermal Unit (Component Side)/
Thermoeinheit (Bestückungsseite)



Keypad Unit (Wiring Side)



Keypad Unit (Component Side)



Formatter Unit (Wiring Side)

Formatter Unit (Component Side)

PARTS LIST

PARTS REPLACEMENT

Parts marked with "⚠" are important for maintaining the safety of the set. Be sure to replace these parts with specified ones for maintaining the safety and performance of the set.

Les pieces marquées "⚠" sont importantes pour maintenir la sécurité de l'appareil. Ne remplacer ces pieces que par des pieces dont le numéro est spécifié pour maintenir la sécurité et protéger le bon fonctinnement de l'appareil.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER
2. REF. NO.
3. PART NO.
4. DESCRIPTION
5. CODE
6. QUANTITY

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekenn-zeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheitseigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.
2. REF. NR.
3. ERSATZTEIL NR.
4. BESCHREIBUNG
5. KODE
6. QUANTITÄT

★ MARK: SPARE PARTS-DELIVERY SECTION

Ref. No.	Part No.	★	Description	Code

DMD ASSEMBLY

	9HJ48858DMD11	J	DMD Chip	EH

PRINTED WIRING BOARD ASSEMBLIES
(NOT REPLACEMENT ITEM)

	9HJ7089204001	–	Main Unit	—
	9HJ7089212001	–	Thermal Unit	—
	9HJ8086303001	–	Keypad Unit	—
	9HJ8086304002	–	Formatter Unit	—

PRINTED WIRING BOARD ASSEMBLIES
(REPLACEMENT ITEM)

	9HJ7086311001	J	Ballast Unit	CR
	9HJ7583125002	J	DC - DC Unit	BV
	9HJ7685802001	J	Photo Sensor Unit	AX
	9HJ7686301001	J	IR Unit	AX
	9HJ7589201001	J	SW Unit	AR

★ MARKIERUNG : ERSATZTEILE-LIEFERUNG

Ref. No.	Part No.	★	Description	Code

9HJ7089204001
MAIN UNIT

INTEGRATED CIRCUITS

IR1	9HJ20TSOP4131	J	IC, TSOP4138	
U1	9HJ2074AHC1G2	J	IC, SN74AHC1G125	
U2	9HJ2074AHC1G2	J	IC, SN74AHC1G125	
U3	9HJ2024LC21A1	J	IC, 24LC21A	AK
U4	9HJ2024LC21A1	J	IC, 24LC21A	AK
U6	9HJ20AD988302	J	IC, AD9883A-110	
U7	9HJ20S816A331	J	IC, S-816A33AMC	AG
U8	9HJ20MIC52071	J	IC, MIC5207-3.3	
U9	9HJ20LT139901	J	IC, LT1399	AY
U10	9HJ20AIC16601	J	IC, AIC1660	
U11	9HJ20LT139901	J	IC, LT1399	AY
U12	9HJ20SII141C2	J	IC, Sil141	
U13	9HJ2074LVC151	J	IC, 74LVC157	AF
U14	9HJ2074LV1231	J	IC, SN74LV123APWR	AE
U15	9HJ2074LVC151	J	IC, 74LVC157	AF
U16	9HJ20PW166101	J	IC, PW166-10TK	
U17	9HJ2074LVC123	J	IC, 74LVC126A	
U18	9HJ2124LC1601	J	IC, 24LC16B/SN	AK
U19	9HJ2074LVC371	J	IC, 74LVC374	
U20	9HJ20S816A251	J	IC, S-816A25AMC	AG
U21	9HJ2128F800T4	J	IC, TE28F800B3TA90	BA
U22	9HJ20ICS50101	J	IC, ICS501	AR
U23	9HJ20ICS50201	J	IC, ICS502M	AS
U24	9HJ2074LVC741	J	IC, 74LVC74	AE
U25	9HJ2074AHC1G1	J	IC, 74AHC1G32	AE
U26	9HJ2074LVC141	J	IC, 74LVC14	AE
U27	9HJ20SAA71181	J	IC, SAA7118	
U28	9HJ20MIC52071	J	IC, MIC5207-3.3	
U29	9HJ20CY7C6362	J	IC, CY7C63612	
U30	9HJ2074AHC1G3	J	IC, 74AHC1G08DBVR	
U31	9HJ20LM483201	J	IC, LM4832M	AX
U32	9HJ20LM187701	J	IC, LM1877	
U33	9HJ20CS5253B1	J	IC, CS5253B-8	
U34	9HJ2074AHC1G2	J	IC, SN74AHC1G125	
U35	9HJ20S816A331	J	IC, S-816A33AMC	AG
U37	9HJ20LM750001	J	IC, LM75CIM-5	
U38	9HJ20MAX20201	J	IC, MAX202	AT

TRANSISTORS

Q1	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q3	9HJ082SB13861	J	2SB1386	AE

9HJ79HJ7089204001
MAIN UNIT (Continued)

Ref. No.	Part No.	★	Description	Code
Q4	9HJ082SB13861	J	2SB1386	AE
Q5	9HJ08F2202P01	J	MMBF2202PT1	
Q6	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q7	9HJ08T2907A02	J	UMT2907A	AC
Q8	9HJ082SB13861	J	2SB1386	AE
Q9	9HJ082N7002L1	J	2N7002	
Q10	9HJ082N7002L1	J	2N7002	
Q11	9HJ08T2222W01	J	MMBT2222AWT1	AC
	DIODES			
D1	9HJ091PS22601	J	1PS226	
D2	9HJ091PS22601	J	1PS226	
D3	9HJ091PS22601	J	1PS226	
D4	9HJ090805A001	J	ESD0805A	AE
D6	9HJ090805A001	J	ESD0805A	AE
D7	9HJ090805A001	J	ESD0805A	AE
D8	9HJ09MMBD9141	J	MMBD914LT1	AC
D9	9HJ09MMBD9141	J	MMBD914LT1	AC
D10	9HJ09MMBD9141	J	MMBD914LT1	AC
D11	9HJ091PS22601	J	1PS226	
D12	9HJ091PS22601	J	1PS226	
D13	9HJ091PS22601	J	1PS226	
D14	9HJ091PS22601	J	1PS226	
D16	9HJ09MBR05401	J	MBR0540T1	
D17	9HJ09MBR05401	J	MBR0540T1	
D20	9HJ090805A001	J	ESD0805A	AE
D21	9HJ090805A001	J	ESD0805A	AE
D22	9HJ090805A001	J	ESD0805A	AE
D23	9HJ090805A001	J	ESD0805A	AE
	PACKAGED CIRCUITS			
Y1	9HJ0720000102	J	Crystal, 20MHz	AK
Y2	9HJ0724576106	J	Crystal, 24.576MHz	
Y3	9HJ0706000102	J	Crystal, 6MHz	AF
	COILS AND FILTERS			
L1	9HJ0315843301	J	Coil, 0.15μH	
L2	9HJ0315843301	J	Coil, 0.15μH	
L4	9HJ0315843301	J	Coil, 0.15μH	
L5	9HJ0315843301	J	Coil, 0.15μH	
L11	9HJ0310073301	J	Coil, 10μH	AE
L13	9HJ0310073301	J	Coil, 10μH	AE
L14	9HJ0310073301	J	Coil, 10μH	AE
L15	9HJ0310943301	J	Coil, 1μH	
L16	9HJ0310943301	J	Coil, 1μH	
L18	9HJ0315843301	J	Coil, 0.15μH	
L19	9HJ0315843301	J	Coil, 0.15μH	
L20	9HJ0315843301	J	Coil, 0.15μH	
L25	9HJ0310073301	J	Coil, 10μH	AE
FL1	9HJ0502040001	J	Filter, NFM41P11C204	AG
FL2	9HJ0502040001	J	Filter, NFM41P11C204	AG
FL3	9HJ0502040001	J	Filter, NFM41P11C204	AG
FL4	9HJ0502040001	J	Filter, NFM41P11C204	AG
	CAPACITORS			
C1	9HJ0210447101	J	10p 50V	AC
C2	9HJ0210447101	J	10p 50V	AC
C3	9HJ0210447101	J	10p 50V	AC
C4	9HJ0210447101	J	10p 50V	AC
C6	9HJ0247745103	J	0.047 25V	AC
C7	9HJ0247745103	J	0.047 25V	AC
C8	9HJ0247745103	J	0.047 25V	AC
C9	9HJ0210737101	J	0.001 25V	AC
C12	9HJ0239647101	J	3900p 50V	AC
C13	9HJ0239747101	J	0.039 50V	AC
C14	9HJ0210647101	J	1000p 50V	AC
C15	9HJ0247547101	J	470p 50V	
C16	9HJ0247745103	J	0.047 25V	AC
C17	9HJ0247745103	J	0.047 25V	AC
C18	9HJ0247745103	J	0.047 25V	AC
C19	9HJ0247745103	J	0.047 25V	AC
C26	9HJ0210447101	J	10p 50V	AC

Ref. No.	Part No.	★	Description		Code
C26	9HJ0210887101	J	0.1 50V		AC
C27	9HJ0239647101	J	3900p 50V		AC
C28	9HJ0222447101	J	22p 50V		AC
C29	9HJ0210647101	J	1000p 50V		AC
C30	9HJ0210887101	J	0.1 50V		AC
C31	9HJ0210887101	J	0.1 50V		AC
C33	9HJ0222447101	J	22p 50V		AC
C34	9HJ0222447101	J	22p 50V		AC
C36	9HJ0210887101	J	0.1 50V		AC
C37	9HJ0210887101	J	0.1 50V		AC
C38	9HJ0227437101	J	27p 50V		
C39	9HJ0222447101	J	22p 50V		AC
C40	9HJ0227437101	J	27p 50V		
C42	9HJ0247745103	J	0.047 25V		AC
C44	9HJ0247745103	J	0.047 25V		AC
C45	9HJ0247745103	J	0.047 25V		AC
C47	9HJ0210447101	J	10p 50V		AC
C49	9HJ0247547101	J	470p 50V		
C51	9HJ0210447101	J	10p 50V		AC
C52	9HJ0210447101	J	10p 50V		AC
C54	9HJ0222447101	J	22p 50V		AC
C56	9HJ0233447101	J	33p 50V		AC
C57	9HJ0233447101	J	33p 50V		AC
C58	9HJ0210887101	J	0.1 50V		AC
C59	9HJ0210887101	J	0.1 50V		AC
C61	9HJ0210987101	J	1 16V		
C62	9HJ0210987101	J	1 16V		
C63	9HJ0282647101	J	8200p 50V		AC
C64	9HJ0282647101	J	8200p 50V		AC
C65	9HJ0282647101	J	8200p 50V		AC
C66	9HJ0282647101	J	8200p 50V		AC
C67	9HJ0210987101	J	1 16V		
C68	9HJ0210987101	J	1 16V		
C71	9HJ0210987101	J	1 16V		
C72	9HJ0210987101	J	1 16V		
C75	9HJ0210887101	J	0.1 50V		AC
C76	9HJ0210977201	J	1 16V	Chip	AC
C77	9HJ0210977201	J	1 16V	Chip	AC
C78	9HJ0210887101	J	0.1 50V		AC
C79	9HJ0210887101	J	0.1 50V		AC
C80	9HJ0210977201	J	1 16V	Chip	AC
C81	9HJ0210977201	J	1 16V	Chip	AC
C82	9HJ0210887101	J	0.1 50V		AC
C83	9HJ0210887101	J	0.1 50V		AC
C85	9HJ0210887101	J	0.1 50V		AC
C86	9HJ0210887101	J	0.1 50V		AC
C87	9HJ0222447101	J	22p 50V		AC
C88	9HJ0222447101	J	22p 50V		AC
BC1	9HJ0210887101	J	0.1 50V		AC
BC2	9HJ0210887101	J	0.1 50V		AC
BC3	9HJ0210887101	J	0.1 50V		AC
BC4	9HJ0210887101	J	0.1 50V		AC
BC5	9HJ0210887101	J	0.1 50V		AC
BC6	9HJ0210887101	J	0.1 50V		AC
BC7	9HJ0210887101	J	0.1 50V		AC
BC8	9HJ0210887101	J	0.1 50V		AC
BC10	9HJ0210887101	J	0.1 50V		AC
BC11	9HJ0210887101	J	0.1 50V		AC
BC12	9HJ0210887101	J	0.1 50V		AC
BC13	9HJ0210887101	J	0.1 50V		AC
BC15	9HJ0210547102	J	100p 50V		AC
BC16	9HJ0210547102	J	100p 50V		AC
BC17	9HJ0210547102	J	100p 50V		AC
BC18	9HJ0210887101	J	0.1 50V		AC
BC19	9HJ0250547101	J	500p 50V		
BC20	9HJ0250547101	J	500p 50V		
BC21	9HJ0250547101	J	500p 50V		
BC23	9HJ0210647101	J	1000p 50V		AC
BC24	9HJ0210647101	J	1000p 50V		AC
BC25	9HJ0210987101	J	1 16V		
BC26	9HJ0210547102	J	100p 50V		AC
BC29	9HJ0210887101	J	0.1 50V		AC
BC30	9HJ0210887101	J	0.1 50V		AC
BC31	9HJ0210887101	J	0.1 50V		AC
BC32	9HJ0210887101	J	0.1 50V		AC

Ref. No.	Part No.	★	Description			Code

9HJ79HJ7089204001
MAIN UNIT (Continued)

BC34	9HJ0210887101	J	0.1	50V		AC
BC35	9HJ0210887101	J	0.1	50V		AC
BC39	9HJ0210887101	J	0.1	50V		AC
BC40	9HJ0210887101	J	0.1	50V		AC
BC41	9HJ0210887101	J	0.1	50V		AC
BC42	9HJ0210887101	J	0.1	50V		AC
BC44	9HJ0210887101	J	0.1	50V		AC
BC45	9HJ0210887101	J	0.1	50V		AC
BC49	9HJ0210887101	J	0.1	50V		AC
BC50	9HJ0210887101	J	0.1	50V		AC
BC51	9HJ0210887101	J	0.1	50V		AC
BC53	9HJ0210887101	J	0.1	50V		AC
BC55	9HJ0210887101	J	0.1	50V		AC
BC56	9HJ0210887101	J	0.1	50V		AC
BC60	9HJ0210887101	J	0.1	50V		AC
BC61	9HJ0210887101	J	0.1	50V		AC
BC62	9HJ0210887101	J	0.1	50V		AC
BC63	9HJ0210887101	J	0.1	50V		AC
TC1	9HJ0210074502	J	10	16V	Chip	AD
TC2	9HJ0210074502	J	10	16V	Chip	AD
TC3	9HJ0210074502	J	10	16V	Chip	AD
TC5	9HJ0210074502	J	10	16V	Chip	AD
TC6	9HJ0210074502	J	10	16V	Chip	AD
TC9	9HJ0210070901	J	10	25V	Chip	AE
TC10	9HJ0210083101	J	10	16V		
TC11	9HJ0210083101	J	10	16V		
TC12	9HJ0210083101	J	10	16V		
TC13	9HJ0210083101	J	10	16V		
TC14	9HJ0210074502	J	10	16V	Chip	AD
TC15	9HJ0210074502	J	10	16V	Chip	AD
TC16	9HJ0210074502	J	10	16V	Chip	AD
TC17	9HJ0210074502	J	10	16V	Chip	AD
TC18	9HJ0210076902	J	10	35V		AF
TC21	9HJ0210074502	J	10	16V	Chip	AD
TC23	9HJ0222974501	J	2.2	16V	Chip	
TC25	9HJ0210172401	J	100	16V		AD
TC26	9HJ0247074901	J	47	16V	Chip	AG
TC28	9HJ0210070901	J	10	25V	Chip	AE
TC29	9HJ0210172401	J	100	16V		AD
TC30	9HJ0210172401	J	100	16V		AD
TC31	9HJ0210074502	J	10	16V	Chip	AD
TC32	9HJ0210074502	J	10	16V	Chip	AD
TC33	9HJ0210172401	J	100	16V		AD
TC34	9HJ0210074502	J	10	16V	Chip	AD
TC35	9HJ0210074502	J	10	16V	Chip	AD

RESISTORS

R1	9HJ0175016501	J	75	1/16W	Chip	AC
R2	9HJ0175016501	J	75	1/16W	Chip	AC
R4	9HJ0120236501	J	2k	1/16W	Chip	AC
R5	9HJ0120236501	J	2k	1/16W	Chip	AC
R6	9HJ0110236502	J	1k	1/16W	Chip	AC
R8	9HJ0110236502	J	1k	1/16W	Chip	AC
R9	9HJ0120236501	J	2k	1/16W	Chip	AC
R10	9HJ0120416501	J	20k	1/16W	Chip	
R14	9HJ0110136501	J	100	100	Chip	AC
R15	9HJ0300125401	J	BEAD			
R16	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R17	9HJ0110236502	J	1k	1/16W	Chip	AC
R18	9HJ0110236502	J	1k	1/16W	Chip	AC
R19	9HJ0175016501	J	75	1/16W	Chip	AC
R20	9HJ0175016501	J	75	1/16W	Chip	AC
R21	9HJ0110236502	J	1k	1/16W	Chip	AC
R22	9HJ0110236502	J	1k	1/16W	Chip	AC
R23	9HJ0175016501	J	75	1/16W	Chip	AC
R26	9HJ0110236502	J	1k	1/16W	Chip	AC
R27	9HJ0175016501	J	75	1/16W	Chip	AC
R28	9HJ0175016501	J	75	1/16W	Chip	AC
R29	9HJ0110236502	J	1k	1/16W	Chip	AC
R35	9HJ0110236502	J	1k	1/16W	Chip	AC
R36	9HJ0110236502	J	1k	1/16W	Chip	AC
R37	9HJ0175016501	J	75	1/16W	Chip	AC
R38	9HJ0124236501	J	2.4k	1/16W	Chip	
R39	9HJ0151116501	J	510	1/16W	Chip	AC
R40	9HJ0124236501	J	2.4k	1/16W	Chip	
R42	9HJ0124236501	J	2.4k	1/16W	Chip	
R45	9HJ0110336502	J	10k	1/16W	Chip	AC
R46	9HJ0112216502	J	1.2k	1/16W	Chip	AC
R49	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R52	9HJ0100036502	J	0	1/16W	Chip	AC
R54	9HJ0133036502	J	33	1/16W	Chip	AC
R55	9HJ0133036502	J	33	1/16W	Chip	AC
R56	9HJ0133036502	J	33	1/16W	Chip	AC
R58	9HJ0127036501	J	27	1/16W	Chip	
R61	9HJ0110336502	J	10k	1/16W	Chip	AC
R62	9HJ0110336502	J	10k	1/16W	Chip	AC
R63	9HJ0120236501	J	2k	1/16W	Chip	AC
R64	9HJ0110236502	J	1k	1/16W	Chip	AC
R65	9HJ0110336502	J	10k	1/16W	Chip	AC
R66	9HJ0100036502	J	0	1/16W	Chip	AC
R67	9HJ0122036501	J	22	1/16W	Chip	
R68	9HJ0133036502	J	33	1/16W	Chip	AC
R69	9HJ0110336502	J	10k	1/16W	Chip	AC
R70	9HJ0124336501	J	24k	1/16W	Chip	
R71	9HJ0110236502	J	1k	1/16W	Chip	AC
R72	9HJ0110336502	J	10k	1/16W	Chip	AC
R75	9HJ0110336502	J	10k	1/16W	Chip	AC
R76	9HJ0133036502	J	33	1/16W	Chip	AC
R80	9HJ0147236501	J	4.7k	1/16W	Chip	AC
R81	9HJ0118036501	J	18	1/16W	Chip	
R82	9HJ0156036502	J	56	1/16W	Chip	
R83	9HJ0118036501	J	18	1/16W	Chip	
R84	9HJ0118036501	J	18	1/16W	Chip	
R85	9HJ0156036502	J	56	1/16W	Chip	
R86	9HJ0156036502	J	56	1/16W	Chip	
R87	9HJ0110336502	J	10k	1/16W	Chip	AC
R93	9HJ0120416501	J	20k	1/16W	Chip	
R94	9HJ0168436501	J	680k	1/16W	Chip	AC
R95	9HJ0110336502	J	10k	1/16W	Chip	AC
R96	9HJ0110236502	J	1k	1/16W	Chip	AC
R98	9HJ0110536501	J	1M	1/16W	Chip	
R99	9HJ0130316501	J	30.1k	1/16W	Chip	AC
R100	9HJ0140316501	J	40.2k	1/16W	Chip	
R101	9HJ0133036502	J	33	1/16W	Chip	AC
R102	9HJ0133036502	J	33	1/16W	Chip	AC
R103	9HJ0110336502	J	10k	1/16W	Chip	AC
R104	9HJ0110336502	J	10k	1/16W	Chip	AC
R106	9HJ0100036502	J	0	1/16W	Chip	AC
R107	9HJ0139136501	J	390	1/16W	Chip	
R109	9HJ0110336502	J	10k	1/16W	Chip	AC
R110	9HJ0139136501	J	390	1/16W	Chip	
R111	9HJ0139136501	J	390	1/16W	Chip	
R112	9HJ0110336502	J	10k	1/16W	Chip	AC
R113	9HJ0110336502	J	10k	1/16W	Chip	AC
R121	9HJ0147236501	J	4.7k	1/16W	Chip	AC
R122	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R123	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R125	9HJ0100036502	J	0	1/16W	Chip	AC
R126	9HJ0100036502	J	0	1/16W	Chip	AC
R129	9HJ0100036502	J	0	1/16W	Chip	AC
R135	9HJ0110236502	J	1k	1/16W	Chip	AC
R138	9HJ0175236501	J	7.5k	1/16W	Chip	AC
R141	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R147	9HJ0110336502	J	10k	1/16W	Chip	AC
R148	9HJ0110436501	J	100k	1/16W	Chip	AC
R149	9HJ0100036502	J	0	1/16W	Chip	AC
R151	9HJ0147236501	J	4.7k	1/16W	Chip	AC
R152	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R153	9HJ0110336502	J	10k	1/16W	Chip	AC
R181	9HJ0133236501	J	3.3k	1/16W	Chip	AC
RP1	9HJ0133236101	J	3.3k	1/16W		
RP2	9HJ0133036501	J	33	1/16W		
RP3	9HJ0133036501	J	33	1/16W		
RP4	9HJ0133036501	J	33	1/16W		
RP5	9HJ0133036501	J	33	1/16W		
RP6	9HJ0133036501	J	33	1/16W		

Ref. No.	Part No.	★	Description	Code

9HJ79HJ7089204001
MAIN UNIT (Continued)

L6	9HJ0100039501	J	0	1/10W	Chip	AC
L7	9HJ0100039501	J	0	1/10W	Chip	AC
L8	9HJ0100039501	J	0	1/10W	Chip	AC
L10	9HJ0100039501	J	0	1/10W	Chip	AC
L12	9HJ0100034501	J	0	1/4W	CHIP	
L21	9HJ0147039501	J	47	1/10W	Chip	
L22	9HJ0147039501	J	47	1/10W	Chip	
L24	9HJ0100039501	J	0	1/10W	Chip	AC
L26	9HJ0147039501	J	47	1/10W	Chip	
L27	9HJ0147039501	J	47	1/10W	Chip	

MISCELLANEOUS PARTS

F1	9HJ0620003001	J	Fuse,	
CON1	9HJ11155F2202	J	Connector, D-SUB 15Pin	AM
J1	9HJ11369F2301	J	Connector, P&D F DIP/RIG	
J3	9HJ11010F2304	J	Connector, RCA F PIN	
J4	9HJ11040F2006	J	Connector, MINI DIN 4Pin	AF
J5	9HJ11000F4401	J	Connector, 120P	
J6	9HJ11140F3701	J	Connector, 14P	
J7	9HJ11403F3302	J	Connector, 40P	
J8	9HJ11039F2005	J	Connector, MINI DIN	
J9	9HJ11050F2006	J	Connector, 5Pin	
J10	9HJ11029M1302	J	Connector, 2Pin	
	9HJ5183318001	J	IR MYLAR OF M/B	

Ref. No.	Part No.	★	Description	Code

9HJ7089212001
THERMAL UNIT

INTEGRATED CIRCUITS

U1	9HJ20PIC16C52	J	IC, PIC16C57C	
U3	9HJ20LM393002	J	IC, UPC393G2	AF
U4	9HJ20LD1117S1	J	IC	AH
U5	9HJ08SI9936D1	J	SI9936DY	
U6	9HJ20PQ20WZ11	J	IC, PQ20WZ11	AL
U7	9HJ20M62334F1	J	IC, M62334FP	
U8	9HJ20PQ20WZ11	J	IC, PQ20WZ11	AL
U9	9HJ20PQ20WZ11	J	IC, PQ20WZ11	AL
U10	9HJ08SI9936D1	J	SI9936DY	
U11	9HJ20PQ20WZ11	J	IC, PQ20WZ11	AL

TRANSISTORS

Q1	9HJ08T2907A02	J	UMT2907A	AC
Q2	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q3	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q4	9HJ08IRF74161	J	IRF7416	
Q5	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q6	9HJ08T2222W01	J	MMBT2222AWT1	AC

DIODES

D1	9HJ091N414802	J	RLS4148	AC
D2	9HJ091N414802	J	RLS4148	AC
D3	9HJ091N414802	J	RLS4148	AC
D4	9HJ091N414802	J	RLS4148	AC

PACKAGED CIRCUIT

Y1	9HJ0704000101	J	Crystal, 4MHz

FILTERS

FL1	9HJ0502040001	J	Filter, NFM41P11C204T1	AG
FL2	9HJ0502040001	J	Filter, NFM41P11C204T1	AG
FL3	9HJ0502040001	J	Filter, NFM41P11C204T1	AG
FL4	9HJ0502040001	J	Filter, NFM41P11C204T1	AG

CAPACITORS

C1	9HJ0210887101	J	0.1	50V		AC
C2	9HJ0210447101	J	10p	50V		AC
C3	9HJ0218647101	J	18p	50V		
C4	9HJ0210074502	J	10	16V	Chip	AD
C5	9HJ0210887101	J	0.1	50V		AC
C6	9HJ0233647101	J	0.0033	50V		
C9	9HJ0210076902	J	10	35V		AF
C10	9HJ0210076902	J	10	35V		AF
C11	9HJ0210074502	J	10	16V	Chip	AD
C12	9HJ0210074502	J	10	16V	Chip	AD
C14	9HJ0210074502	J	10	16V	Chip	AD
C15	9HJ0210887101	J	0.1	50V		AC
C16	9HJ0210070901	J	10	25V	Chip	AE
C18	9HJ0210070901	J	10	25V	Chip	AE
C20	9HJ0210070901	J	10	25V	Chip	AE
C21	9HJ0210172401	J	100	16V		AD
C22	9HJ0210172401	J	100	16V		AD
C23	9HJ0210172401	J	100	16V		AD
C24	9HJ0210887101	J	0.1	50V		AC
C25	9HJ0210074502	J	10	16V	Chip	AD
C26	9HJ0210074502	J	10	16V	Chip	AD
C30	9HJ0210887101	J	0.1	50V		AC
C31	9HJ0210747201	J	0.01	50V	Chip	
C32	9HJ0210887101	J	0.1	50V		AC
C33	9HJ0210076902	J	10	35V		AF
C34	9HJ0210070901	J	10	25V	Chip	AE
C39	9HJ0210887101	J	0.1	50V		AC

RESISTORS

R1	9HJ0110336502	J	10k	1/16W	Chip	AC
R4	9HJ0110336502	J	10k	1/16W	Chip	AC
R5	9HJ0110336502	J	10k	1/16W	Chip	AC
R6	9HJ0110336502	J	10k	1/16W	Chip	AC
R7	9HJ0110336502	J	10k	1/16W	Chip	AC
R10	9HJ0110236502	J	1k	1/16W		AC

Ref. No.	Part No.	★	Description	Code

9HJ7089212001
THERMAL UNIT (Continued)

R11	9HJ0110236502	J	1k	1/16W		AC
R12	9HJ0110336502	J	10k	1/16W	Chip	AC
R13	9HJ0110336502	J	10k	1/16W	Chip	AC
R14	9HJ0110236502	J	1k	1/16W		AC
R15	9HJ0110336502	J	10k	1/16W	Chip	AC
R16	9HJ0110336502	J	10k	1/16W	Chip	AC
R17	9HJ0150216501	J	4.99k	1/16W	Chip	
R19	9HJ0110436501	J	100k	1/16W	chip	AC
R20	9HJ0110316501	J	10k	1/16W	Chip	AC
R21	9HJ0139136501	J	390	1/16W	Chip	
R22	9HJ0110236502	J	1k	1/16W		AC
R23	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R24	9HJ0110236502	J	1k	1/16W		AC
R25	9HJ0110336502	J	10k	1/16W	Chip	AC
R26	9HJ0110336502	J	10k	1/16W	Chip	AC
R28	9HJ0175216501	J	7.5k	1/16W	Chip	
R29	9HJ0120216501	J	2k	1/16W		AC
R30	9HJ0100036502	J	0	1/16W	Chip	AC
R31	9HJ0100036502	J	0	1/16W	Chip	AC
R32	9HJ0171216501	J	7.15k	1/16W	Chip	
R35	9HJ0120216501	J	2k	1/16W		AC
R38	9HJ0171216501	J	7.15k	1/16W	Chip	
R39	9HJ0120216501	J	2k	1/16W		AC
R43	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R44	9HJ0118134502	J	180	1/4W	Chip	AC
R45	9HJ0175034501	J	75	1/4W	Chip	AC
R46	9HJ0147236501	J	4.7k	1/16W	Chip	AC
R47	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R48	9HJ0118134502	J	180	1/4W	Chip	AC
R49	9HJ0175034501	J	75	1/4W	Chip	AC
R50	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R51	9HJ0118134502	J	180	1/4W	Chip	AC
R52	9HJ0175034501	J	75	1/4W	Chip	AC
R53	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R54	9HJ0118134502	J	180	1/4W	Chip	AC
R55	9HJ0175034501	J	75	1/4W	Chip	AC
R56	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R57	9HJ0118134502	J	180	1/4W	Chip	AC
R58	9HJ0175034501	J	75	1/4W	Chip	AC
R62	9HJ0112234501	J	1.2k	1/4W	Chip	AC
R63	9HJ0118134502	J	180	1/4W	Chip	AC
R64	9HJ0175034501	J	75	1/4W	Chip	AC
R65	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R66	9HJ0110136501	J	100	1/16W		AC
R67	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R68	9HJ0110136501	J	100	1/16W		AC
R69	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R70	9HJ0110136501	J	100	1/16W		AC
R71	9HJ0175016501	J	75	1/16W	Chip	AC
R75	9HJ0110336502	J	10k	1/16W	Chip	AC
R77	9HJ0100036502	J	0	1/16W	Chip	AC
R78	9HJ0100036502	J	0	1/16W	Chip	AC
R79	9HJ0100036502	J	0	1/16W	Chip	AC
R80	9HJ0133236501	J	3.3k	1/16W	Chip	AC
R81	9HJ0110136501	J	100	1/16W		AC
R82	9HJ0133036502	J	33	1/16W	Chip	AC
R83	9HJ0120216501	J	2k	1/16W		AC
R84	9HJ0171216501	J	7.15k	1/16W	Chip	

MISCELLANEOUS PARTS

JP2	9HJ11403M3301	J	Connector, 40Pin	
J2	9HJ11039M2306	J	Connector, 3Pin	
J3	9HJ11039M2307	J	Connector, 3Pin	
J4	9HJ11029M2302	J	Connector, 2Pin	AD
J5	9HJ11039M1305	J	Connector, 3Pin	
J6	9HJ11039M2302	J	Connector, 3Pin	AD
J7	9HJ11142M2301	J	Connector, 14Pin	
J8	9HJ11039M2308	J	Connector, 3Pin	
J10	9HJ11039M2304	J	Connector, 3Pin	AD
J11	9HJ11039M1305	J	Connector, 3Pin	

Ref. No.	Part No.	★	Description	Code

9HJ8086303001
KEYPAD UNIT

TRANSISTORS

Q1	9HJ082SC16231	J	2SC1623	AC
Q2	9HJ082SC16231	J	2SC1623	AC
Q3	9HJ082SC16231	J	2SC1623	AC

DIODES

D1	9HJ0917215SU1	J	LED, RED	
D2	9HJ0917215UY1	J	LED, ORANGE	
D4	9HJ0917215SY1	J	LED, GREEN	

RESISTORS

R2	9HJ0133239501	J	3.3k	1/10W	Chip	
R3	9HJ0133239501	J	3.3k	1/10W	Chip	
R6	9HJ0110139501	J	100	1/10W	Chip	AC
R9	9HJ0133239501	J	3.3k	1/10W	Chip	
R10	9HJ0133239501	J	3.3k	1/10W	Chip	
R11	9HJ0133239501	J	3.3k	1/10W	Chip	
R12	9HJ0133239501	J	3.3k	1/10W	Chip	
R19	9HJ0122139501	J	220	1/10W	Chip	
R20	9HJ0122139501	J	220	1/10W	Chip	
R21	9HJ0100039501	J	0	1/10W	Chip	AC
R22	9HJ0100039501	J	0	1/10W	Chip	AC
R26	9HJ0122139501	J	220	1/10W	Chip	
R32	9HJ0100039501	J	0	1/10W	Chip	AC

MISCELLANEOUS PARTS

J1	9HJ11140F4701	J	Connector
S1	9HJ4380719302	J	Switch, MENU
S2	9HJ4380719302	J	Switch, UP
S3	9HJ4380719302	J	Switch, DOWN
S4	9HJ4380719302	J	Switch, LEFT
S5	9HJ4380719302	J	Switch, RIGHT
S6	9HJ4380719302	J	Switch, POWER
S7	9HJ4380719302	J	Switch, ENTER

9HJ8086304002
FORMATTER UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
U1	9HJ20CDCR8301	J	CDCR83	AX
U2	9HJ20AHCT1401	J	74AHCT14	AE
U3	9HJ20DDP10001	J	DDP1000	CA
U4	9HJ21AM29LV81	J	AM29LV800B	BA
U5	9HJ20LT161301	J	LT1613	AT
U7	9HJ20SC1565I1	J	SC1565IST-1.8TR	
U45	9HJ20K4R27162	J	K4R271669B-SCK8	BF
U503	9HJ20A8904SL1	J	IC	BD
U504	9HJ20OPA237N1	J	OPA237NA	AM
U505	9HJ20OPA237N1	J	OPA237NA	AM
U506	9HJ20OPA237N1	J	OPA237NA	AM
U507	9HJ20KSR16C01	J	80PQFP	BG
D501	9HJ204040C301	J	LM4040CIM3-5.0	AK
D502	9HJ204040C301	J	LM4040CIM3-5.0	AK
	9HJ20MIC39101	J	MIC39100-1.8BS	AM

TRANSISTORS

Q1	9HJ08IRF90141	J	IRFL9014	AH
Q2	9HJ08PBSS4351	J	TRNSTR NPN PBSS4350Z	AE
Q501	9HJ08T2907A02	J	UMT2907A	AC
Q502	9HJ08T2907A02	J	UMT2907A	AC
Q503	9HJ08T2222W01	J	MMBT2222AWT1	AC
Q504	9HJ08T2907A02	J	UMT2907A	AC
Q505	9HJ08MMBT2221	J	MMBT2222ALT1	AD
Q506	9HJ08T2907A02	J	UMT2907A	AC
QP501	9HJ08MMDT2901	J	TMMDT2907A	AD
QP502	9HJ08MUN52151	J	MUN5215DW1T1	AD
QP503	9HJ08MUN52151	J	MUN5215DW1T1	AD
QP504	9HJ08SI1902D1	J	SI1902DL	AF
QP505	9HJ08SI1902D1	J	SI1902DL	AF

DIODES

D1	9HJ09BAT54S01	J	Diode, BAT54SW	
D2	9HJ09BAT54S01	J	Diode, BAT54SW	
D3	9HJ09BAT54S01	J	Diode, BAT54SW	
D4	9HJ09BAT54S01	J	Diode, BAT54SW	
D5	9HJ09MBR05401	J	Diode, MBR0540T1	
D6	9HJ09MBR05401	J	Diode, MBR0540T1	
D7	9HJ09MBR05401	J	Diode, MBR0540T1	

PACKAGED CIRCUITS

U8	9HJ0710000302	J	Crystal, 100MHz	AS
U502	9HJ0760000301	J	Crystal, 60MHz	AR

COILS

F1	9HJ0300084402	J	Ferrite, HI0805R121R	AD
F2	9HJ0300082402	J	Ferrite, MI0603J680R	AD
F3	9HJ0300082402	J	Ferrite, MI0603J680R	AD
F501	9HJ0300084402	J	Ferrite, HI0805R121R	AD
F502	9HJ0300082402	J	Ferrite, MI0603J680R	AD
F503	9HJ0300084402	J	Ferrite, HI0805R121R	AD
F504	9HJ0300083402	J	Ferrite, HI1206T500R	AD
F505	9HJ0300082402	J	Ferrite, MI0603J680R	AD
F506	9HJ0300084402	J	Ferrite, HI0805R121R	AD
F507	9HJ0300082402	J	Ferrite, MI0603J680R	AD
L1	9HJ0322000101	J	Coil, 22uH	AK

CAPACITORS

C1	9HJ0210074502	J	10	16V	Chiip	AD
C3	9HJ0210887101	J	0.1	50V		AC
C4	9HJ0210887101	J	0.1	50V		AC
C5	9HJ0210887101	J	0.1	50V		AC
C7	9HJ0210887101	J	0.1	50V		AC
C8	9HJ0268437202	J	68p	50V	Chip	AD
C10	9HJ0268437202	J	68p	50V	Chip	AD
C11	9HJ0210887101	J	0.1	50V		AC
C12	9HJ0210074502	J	10	16V	Chiip	AD
C13	9HJ0210887101	J	0.1	50V		AC
C14	9HJ0210887101	J	0.1	50V		AC
C15	9HJ0210887101	J	0.1	50V		AC
C16	9HJ0210887101	J	0.1	50V		AC
C17	9HJ0233843201	J	0.33	10V		AD
C18	9HJ0210743201	J	0.01	10V		AD
C19	9HJ0210172901	J	100	6.3V		AE
C20	9HJ0210777201	J	0.001	50V		AD
C21	9HJ0210887101	J	0.1	50V		AC
C22	9HJ0210074502	J	10	16V	Chiip	AD
C23	9HJ0210887101	J	0.1	50V		AC
C24	9HJ0268437202	J	68p	50V	Chip	AD
C26	9HJ0268437202	J	68p	50V	Chip	AD
C28	9HJ0210974901	J	1	16V		AD
C31	9HJ0210777201	J	0.001	50V		AD
C32	9HJ0210887101	J	0.1	50V		AC
C33	9HJ0210887101	J	0.1	50V		AC
C34	9HJ0210887101	J	0.1	50V		AC
C35	9HJ0210887101	J	0.1	50V		AC
C37	9HJ0210076902	J	10	35V		AF
C38	9HJ0210887101	J	0.1	50V		AC
C39	9HJ0210777201	J	0.001	50V		AD
C44	9HJ0210887101	J	0.1	50V		AC
C45	9HJ0210887101	J	0.1	50V		AC
C46	9HJ0210976901	J	1	35V		AD
C47	9HJ0233645101	J	0.0033	25V		AD
C48	9HJ0210074502	J	10	16V	Chiip	AD
C49	9HJ0210076902	J	10	35V		AF
C50	9HJ0210887101	J	0.1	50V		AC
C51	9HJ0210847201	J	0.1	50V		AD
C52	9HJ0210974901	J	1	16V		AD
C54	9HJ0247347101	J	4.7p	50V		AD
C55	9HJ0210887101	J	0.1	50V		AC
C56	9HJ0247974901	J	4.7	16V		AD
C57	9HJ0210887101	J	0.1	50V		AC
C58	9HJ0247974901	J	4.7	16V		AD
C59	9HJ0210887101	J	0.1	50V		AC
C62	9HJ0210887101	J	0.1	50V		AC
C63	9HJ0215172901	J	150	6.3V		AG
C64	9HJ0210976901	J	1	35V		AD
C66	9HJ0233976901	J	3.3	35V		AE
C67	9HJ0210074502	J	10	16V	Chiip	AD
C68	9HJ0233976901	J	3.3	35V		AE
C69	9HJ0210172901	J	100	6.3V		AE
C70	9HJ0210847201	J	0.1	50V		AD
C71	9HJ0210887101	J	0.1	50V		AC
C72	9HJ0210887101	J	0.1	50V		AC
C73	9HJ0210887101	J	0.1	50V		AC
C501	9HJ0210887101	J	0.1	50V		AC
C503	9HJ0210887101	J	0.1	50V		AC
C504	9HJ0210887101	J	0.1	50V		AC
C508	9HJ0210887101	J	0.1	50V		AC
C509	9HJ0222845102	J	0.22	25V		AD
C510	9HJ0210887101	J	0.1	50V		AC
C511	9HJ0210887101	J	0.1	50V		AC
C512	9HJ0210887101	J	0.1	50V		AC
C513	9HJ0210887101	J	0.1	50V		AC
C515	9HJ0210887101	J	0.1	50V		AC
C516	9HJ0210887101	J	0.1	50V		AC
C520	9HJ0210887101	J	0.1	50V		AC
C521	9HJ0210887101	J	0.1	50V		AC
C522	9HJ0210887101	J	0.1	50V		AC
C523	9HJ0210074502	J	10	16V	Chiip	AD
C524	9HJ0210887101	J	0.1	50V		AC
C525	9HJ0210887101	J	0.1	50V		AC
C527	9HJ0210747101	J	0.01	50V		AC
C528	9HJ0210887101	J	0.1	50V		AC
C529	9HJ0210887101	J	0.1	50V		AC
C530	9HJ0268437202	J	68p	50V	Chip	AD
C533	9HJ0210887101	J	0.1	50V		AC
C534	9HJ0215647101	J	0.0015	50V		AD
C535	9HJ0210887101	J	0.1	50V		AC
C536	9HJ0210887101	J	0.1	50V		AC
C537	9HJ0210887101	J	0.1	50V		AC
C538	9HJ0210887101	J	0.1	50V		AC
C540	9HJ0210887101	J	0.1	50V		AC
C541	9HJ0215647101	J	0.0015	50V		AD
C542	9HJ0210887101	J	0.1	50V		AC

9HJ8086304002
FORMATTER UNIT (Continued)

Ref. No.	Part No.	★	Description			Code
C546	9HJ0210887101	J	0.1	50V		AC
C547	9HJ0210887101	J	0.1	50V		AC
C548	9HJ0210887101	J	0.1	50V		AC
C549	9HJ0210887101	J	0.1	50V		AC
C551	9HJ0210887101	J	0.1	50V		AC
C552	9HJ0210887101	J	0.1	50V		AC
C557	9HJ0210887101	J	0.1	50V		AC
C558	9HJ0215172901	J	150	6.3V		AG
C561	9HJ0210887101	J	0.1	50V		AC
C562	9HJ0233976901	J	3.3	35V		AE
C563	9HJ0210887101	J	0.1	50V		AC
C564	9HJ0210887101	J	0.1	50V		AC
C565	9HJ0210887101	J	0.1	50V		AC

RESISTORS

R1	9HJ0139029501	J	39	1/10W	Chip	AD
R2	9HJ0110236502	J	1k	1/16W		AC
R3	9HJ0110339502	J	10k	1/10W	Chip	AD
R4	9HJ0115539501	J	1.5M	1/10W	Chip	AD
R5	9HJ0122239502	J	2.2k	1/10W	Chip	AD
R6	9HJ0111119501	J	110	1/10W	Chip	AD
R7	9HJ0111119501	J	110	1/10W	Chip	AD
R8	9HJ0122239502	J	2.2k	1/10W	Chip	AD
R9	9HJ0115134201	J	150	1/4W		AD
R10	9HJ0156019501	J	56.2	1/10W	Chip	AD
R11	9HJ0156019501	J	56.2	1/10W	Chip	AD
R12	9HJ0115134201	J	150	1/4W		AD
R13	9HJ0115134201	J	150	1/4W		AD
R14	9HJ0144219501	J	4.42k	1/10W	Chip	AD
R15	9HJ0139029501	J	39	1/10W	Chip	AD
R16	9HJ0139029501	J	39	1/10W	Chip	AD
R17	9HJ0110419501	J	100k	1/10W	Chip	AD
R18	9HJ0124039501	J	24	1/10W	Chip	AD
R19	9HJ0139029501	J	39	1/10W	Chip	AD
R20	9HJ0110236502	J	1k	1/16W		AC
R21	9HJ0139029501	J	39	1/10W	Chip	AD
R46	9HJ0124119501	J	249	1/10W		AD
R501	9HJ0110236502	J	1k	1/16W		AC
R503	9HJ0110339502	J	10k	1/10W	Chip	AD
R504	9HJ0110339502	J	10k	1/10W	Chip	AD
R505	9HJ0110236502	J	1k	1/16W		AC
R506	9HJ0122019501	J	22	1/10W		AD
R507	9HJ0110236502	J	1k	1/16W		AC
R509	9HJ0110339502	J	10k	1/10W	Chip	AD
R510	9HJ0122019501	J	22	1/10W		AD
R511	9HJ0110236502	J	1k	1/16W		AC
R512	9HJ0100039502	J	0	1/10W		AD
R513	9HJ0122239502	J	2.2k	1/10W	Chip	AD
R514	9HJ0122239502	J	2.2k	1/10W	Chip	AD
R515	9HJ0127039502	J	27	1/10W	Chip	AD
R517	9HJ0110236502	J	1k	1/16W		AC
R518	9HJ0122019501	J	22	1/10W		AD
R521	9HJ0115239502	J	1.5k	1/10W	Chip	AD
R523	9HJ0100039503	J	0	1/10W		AD
R524	9HJ0124039501	J	24	1/10W	Chip	AD
R526	9HJ0100039503	J	0	1/10W		AD
R527	9HJ0110419501	J	100k	1/10W	Chip	AD
R528	9HJ0127339502	J	27k	1/10W	Chip	AD
R529	9HJ0124039501	J	24	1/10W	Chip	AD
R530	9HJ0133039502	J	22	1/10W	Chip	AD
R532	9HJ0110236502	J	1k	1/16W		AC
R534	9HJ0110236502	J	1k	1/16W		AC
R535	9HJ0120379501	J	20k	1/10W	Chip	AD
R536	9HJ0100039503	J	0	1/10W		AD
R537	9HJ0110236502	J	1k	1/16W		AC
R538	9HJ0101039501	J	1	1/10W		AD
R539	9HJ0147279501	J	4.75k	1/10W	Chip	AD
R540	9HJ0110236502	J	1k	1/16W		AC
R541	9HJ0120219501	J	2k	1/10W	Chip	AD
R542	9HJ0111119501	J	110	1/10W	Chip	AD
R543	9HJ0124039501	J	24	1/10W	Chip	AD
R545	9HJ0100039502	J	0	1/10W		AD
R546	9HJ0110039501	J	10	1/10W	Chip	AD
R547	9HJ0140219501	J	4.02k	1/16W		AD
R548	9HJ0147279501	J	4.75k	1/10W	Chip	AD
R549	9HJ0101039501	J	1	1/10W		AD
R550	9HJ0120376502	J	20k	1/16W	Chip	AD
R551	9HJ0120219501	J	2k	1/10W	Chip	AD
R552	9HJ0124039501	J	24	1/10W	Chip	AD
R554	9HJ0110236502	J	1k	1/16W		AC
R555	9HJ0101039501	J	1	1/10W		AD
R556	9HJ0110039501	J	10	1/10W	Chip	AD
R557	9HJ0100039502	J	0	1/10W		AD
R558	9HJ0124119501	J	249	1/10W		AD
R559	9HJ0139029501	J	39	1/10W	Chip	AD
R560	9HJ0100039502	J	0	1/10W		AD
R561	9HJ0110339502	J	10k	1/10W	Chip	AD
R562	9HJ0134019501	J	34	1/10W	Chip	AD
R563	9HJ0152119501	J	523	1/10W	Chip	AD
R566	9HJ0180119501	J	806	1/10W	Chip	AD
R567	9HJ0111119502	J	118	1/10W	Chip	AD
R568	9HJ0139029501	J	39	1/10W	Chip	AD
RP1	9HJ0139016002	J	39	1/16W	8 POS Array	AD
RP2	9HJ0139016002	J	39	1/16W	8 POS Array	AD
RP3	9HJ0139016002	J	39	1/16W	8 POS Array	AD
RP4	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP5	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP6	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP50	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP501	9HJ0127336502	J	27k	1/16W		AD
RP502	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP503	9HJ0122036503	J	22	1/16W	8 POS Array	AD
RP504	9HJ0127336503	J	27k	1/16W		AD
RP507	9HJ0122036503	J	22	1/16W	8 POS Array	AD

MISCELLANEOUS PARTS

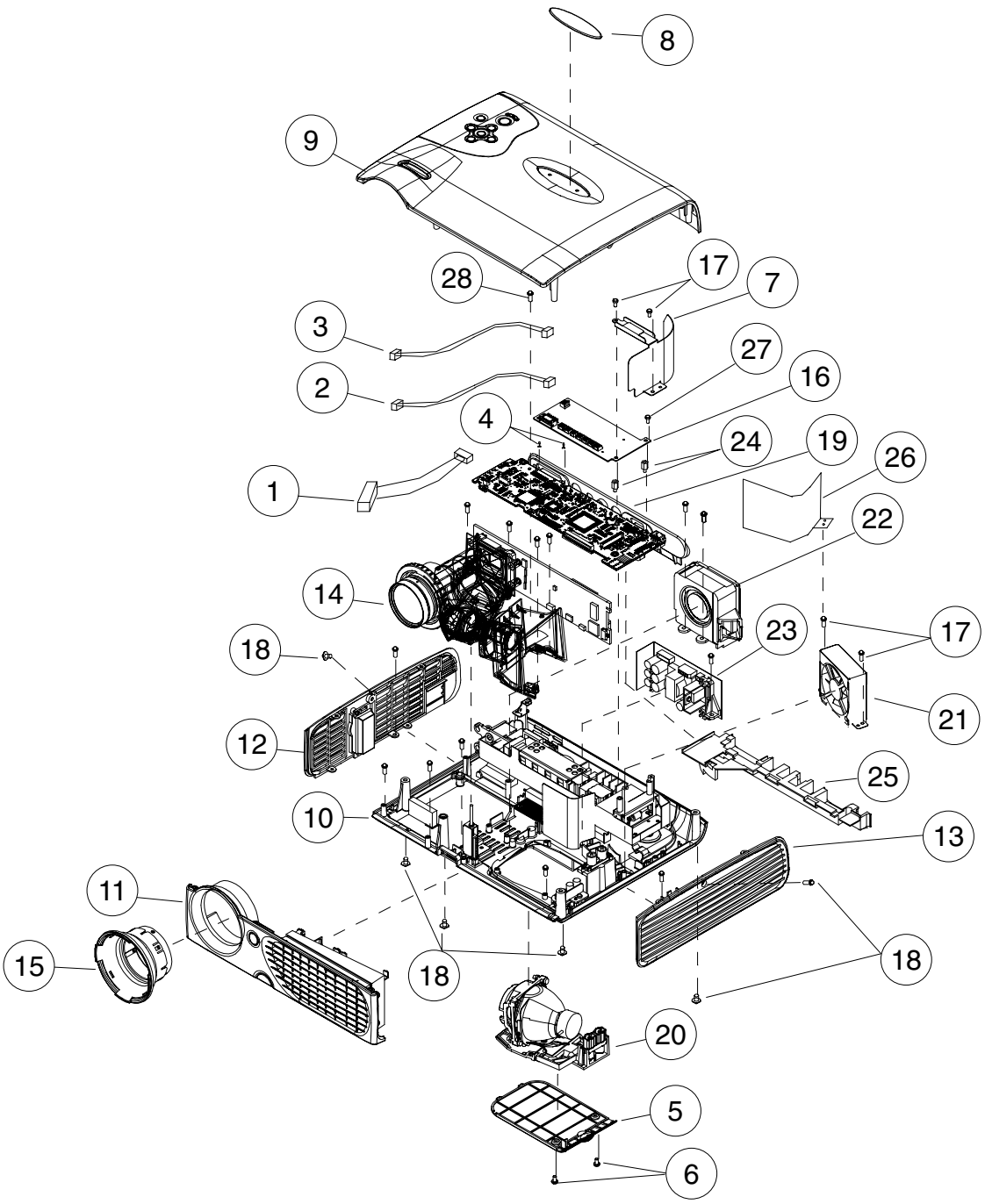
J1	9HJ11000M3401	J	Connector, 120pin	AX
J501	9HJ11041F4701	J	Connector, 4pin	AD
	9HJ6187225001	J	DMD SR16C ESD COPPER SLIZE FOR 3200MP	AD

- M E M O -

CABINET AND MECHANICAL PARTS

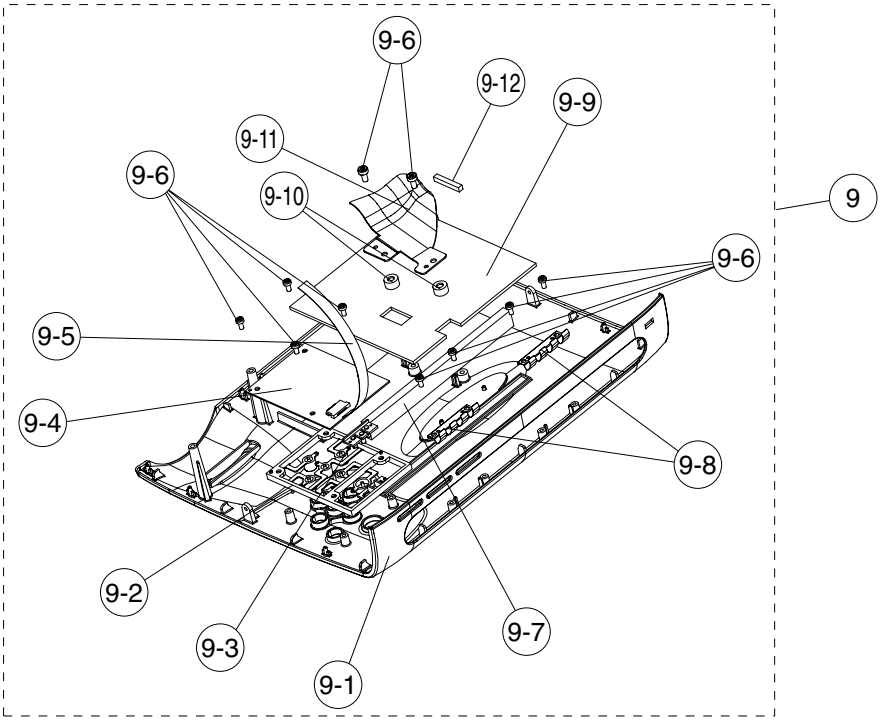
Ref. No.	Part No.	★	Description	Code
1	9HJ4285802003	J	Connecting Cord (Therma Unitl - Ballast Unit)	AQ
2	9HJ4285808001	J	Connecting Cord (Ballast Unit - GND)	AF
3	9HJ4285809001	J	Connecting Cord (Ballast Unit - Thermal Unit)	AL
4	9HJ5100071001	J	Spacer, x2	AD
5	9HJ5186301001	J	Lamp Bottom Cover	AT
6	9HJ6100018002	J	Screw, x6	AD
7	9HJ6186302001	J	Fan Guide Blacket	AM
8	9HJ6186304011	J	SHARP Badge	AN
9	9HJ7089202002	J	Top Cover Ass'y	BT
9-1	Not Available	-	Top Cover	—
9-2	9HJ7586306001	J	Speaker Rubber Pad	
9-3	9HJ5186303001	J	LED Lens	AF
9-4	9HJ8086303001	-	Keypad Unit	—
9-5	9HJ4285801001	J	FFC	AH
9-6	9HJ851A626050	J	Screw, x10	AD
9-7	9HJ5286304001	J	Top Sealing Sponge	AF
9-8	9HJ6186311001	J	Top Cover Spring	AG
9-9	9HJ5286312001	J	Heat Insulation Pad	AN
9-10	9HJ5100068001	J	Washer, x2	AD
9-11	9HJ6186314001	J	Light Cut Up for Lamp	AM
9-12	9HJ4186301001	J	Spacer	AD
10	9HJ7086321001	J	Bottom Cover Ass'y	BU
10-1	9HJ5100068001	J	Washer, x1	AD
10-2	9HJ5100075001	J	Wire Holder	AD
10-3	9HJ5185803002	J	Hight Adjust Foot	AH
10-4	9HJ5186304001	J	Elevator Foot	AN
10-5	9HJ5186305001	J	Elevator Hook	AK
10-6	9HJ5285801001	J	Rubber Foot	AD
10-7	9HJ5286311002	J	Thermal Pad A	AM
10-8	9HJ5285818001	J	Left Rubber Foot	AD
10-9	9HJ6100022001	J	Self Locking Ring	AD
10-10	*Not Available*	-	Bottom Cover	—
10-11	9HJ6186306001	J	Bottom Cover Mesh Iron Net	AF
10-12	9HJ6186307001	J	Elevator Bracet	AK
10-13	9HJ6186308001	J	Elevator Foot Spring	AD
10-14	9HJ6186309001	J	Elevator Push Spring	AD
10-15	9HJ5286305001	J	Elevator Foot Rubber	AD
10-16	9HJ5286306001	J	Bottom Sealing Sponge	AD
10-17	9HJ7589201001	-	Switch Unit	AR
10-18	9HJ7086311001	J	Ballast Unit	CR
10-19	*Not Available*	-	Support, x2	—
10-20	9HJ851A626050	J	Screw, x2	AD
10-21	9HJ851C224050	J	Screw, x1	AD
10-22	9HJ851D122050	J	Screw, x2	AD
10-23	9HJ851G923064	J	Screw, x1	AD
10-24	9HJ5186319002	J	Ballast Cover	AL
10-25	9HJ5186323001	J	Limitter Switch Holder	AH
10-26	9HJ8600122015	J	Nut, x1	AD
10-27	9HJ5286308001	J	Lens Stand Pad	AF
10-28	9HJ5286313001	J	Lamp Insulation Ceramic Paper	AE
11	Not Available	-	Front Cover Ass'y	—
11-1	9HJ7586301011	J	Front Cover	BE
11-2	9HJ7686301001	-	IR Unit	—
11-3	9HJ5186321001	J	IR Unit Cover Pad	AD
11-4	9HJ4986303001	J	Front Fan Ass'y	BB
11-5	9HJ851A626050	J	Screw, x5	AD
12	9HJ5186311001	J	Right Cover Ass'y	AZ
13	9HJ7086306001	J	Left Cover Ass'y	BB
14	Refer to Optical Engine Mechanical Parts			
15	9HJ7586302001	J	Focus Ring Ass'y	AX
16	9HJ7089212001	-	Thermal unit	—
17	9HJ851A626050	J	Screw, x4	AD
18	9HJ851A623060	J	Screw, x6	AD
19	9HJ7089204001	-	Main Unit	—
20	BQC-PGM17X//1	J	Lamp Unit Ass'y	DA
21	9HJ4986304001	J	Fan (50-15) Unit	BB
22	9HJ4981901001	J	Fan (FAL3F) unit	BG
23	9HJ7583125002	J	DC-DC Unit	BV
24	9HJ85005AG040	J	Screw	AD
25	9HJ5286309001	J	Main Unit Bottom Cover	AU
26	9HJ6186317011	J	Safty Bracket for lamp	AD
27	9HJ851A525040	J	Screw, x1	AD
28	9HJ853A125040	J	Screw, x1	

CABINET AND MECHANICAL PARTS / GEHÄUSE UND MECHANISCHE BAUTEILE

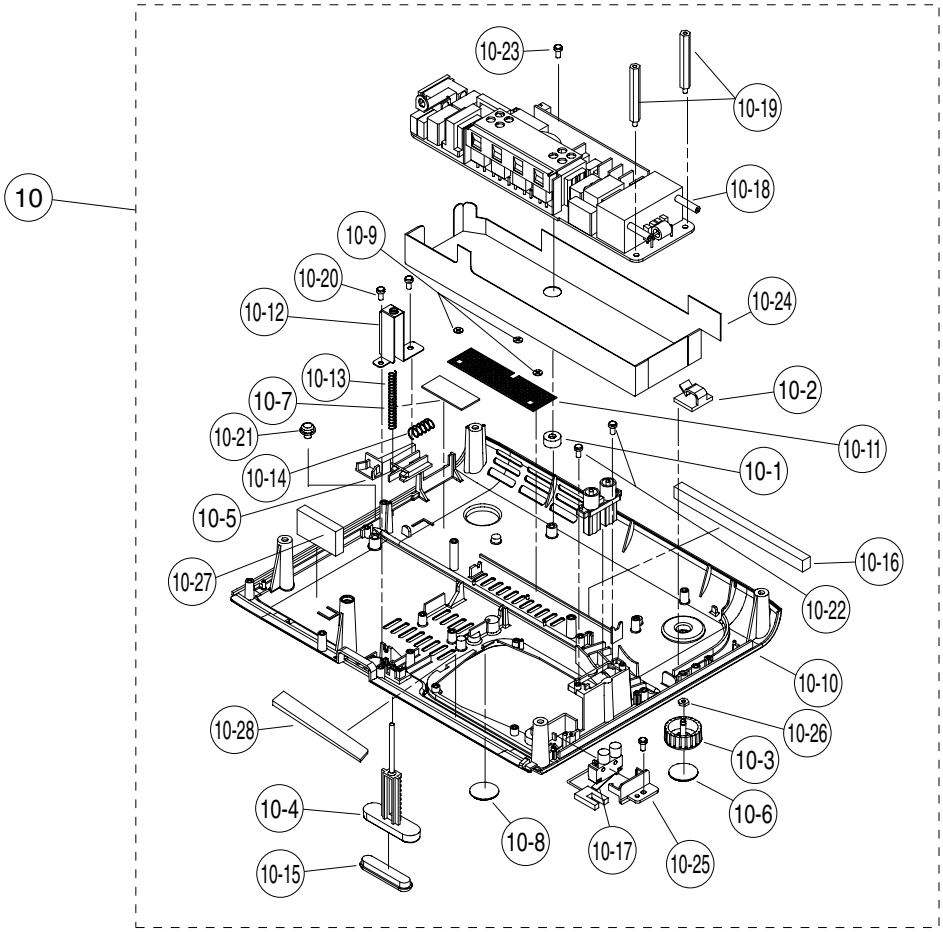


EXPANSION FIGURE OF EACH PARTS

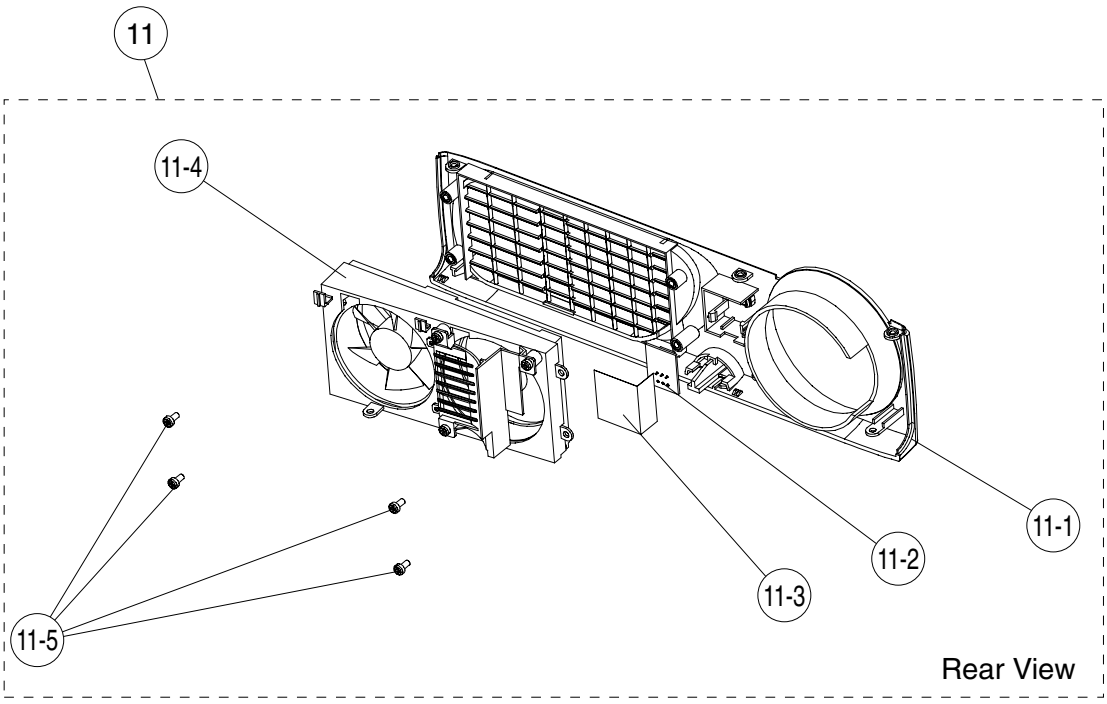
TOP COVER ASS'Y



BOTTOM COVER ASS'Y



FRONT COVER ASS'Y



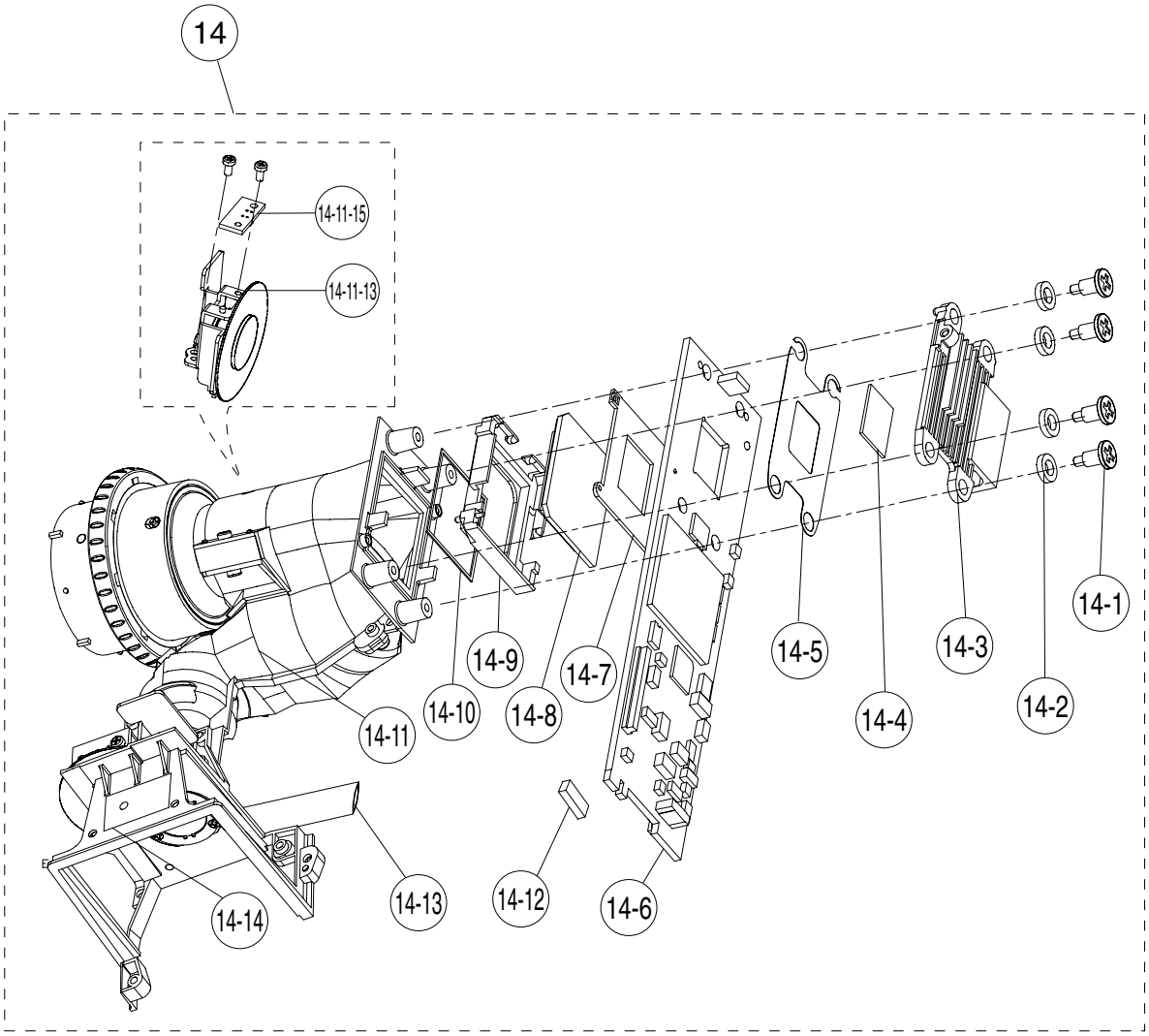
Ref. No.	Part No.	★	Description	Code

OPTICAL ENGINE MECHANICAL PARTS

Ref. No.	Part No.	★	Description	Code
14	Not Available	-	Optic Engine Unit Ass'y	—
14-1	9HJ6185815001	J	Screw, x4	AD
14-2	9HJ5285806001	J	Washer, x4	AD
14-3	9HJ6186312001	J	DMD Heat Sink	AQ
14-4	9HJ5285810001	J	DMD Heat Sink Thermal Pad	AK
14-5	9HJ5186328001	J	DMD Heat Sink Insulator	AD
14-6	9HJ8086304002	-	Formatter unit	—
14-7	9HJ7585803001	J	Contact Housing	BB
14-8	9HJ48858DMD11	J	DMD Chip	EH
14-9	9HJ5185814001	J	DMD Holder	AS
14-10	9HJ6186319001	J	DMD Light Mask	AM
14-11	9HJ7089208001	J	Optic Engine Sub Unit Ass'y	DC
14-11-13	9HJ2385819001	J	Color Wheel unit	
14-11-15	9HJ7685802001	J	Photo Sensor Unit	AX
14-12	9HJ5285819001	J	Tube Color Wheel	AD
14-13	9HJ5286310001	J	DMD Fan Insulator Rubber	AD
14-14	9HJ5289202001	J	Thermal Caption for Thermal Fuse	AD

OPTICAL ENGINE MECHANICAL PARTS / TEILE FÜR OPTIKMECHANISMUS

OPTIC ENGINE UNIT ASS'Y



SUPPLIED ACCESSORIES

Ref. No.	Part No.	★	Description	Code
	9HJ7089211001	J	Remote Control	BV
	9HJ4680301001	J	Batteries	AF
	9HJ4283116001	J	AC Cord for Europe (1.8m)	BB
	9HJ4286301001	J	RS-232(BLUE) to MINI DIN 3pin Cable	AQ
	9HJ4287205001	J	Composite Video Cable	AN
	9HJ4287217001	J	S-VHS Cable	AQ
	9HJ4287213001	J	M1-A to VGA/USB(A) Cable (1.8m)	BD
	9HJ4287215001	J	MINI Jack to MINI Jack Cable	AN
	9HJ5386304021	J	Soft Carring Bag	BH
	9HJ7587801001	J	Lens Cover	AV
	9HJ3689203001	J	Operation Manual	AD
	9HJ3689202001	J	Quick Start Card Multi-lingual	AD
	9HJ3589204001	J	Model Label	AD
	9HJ3583111001	J	No. Card	AD

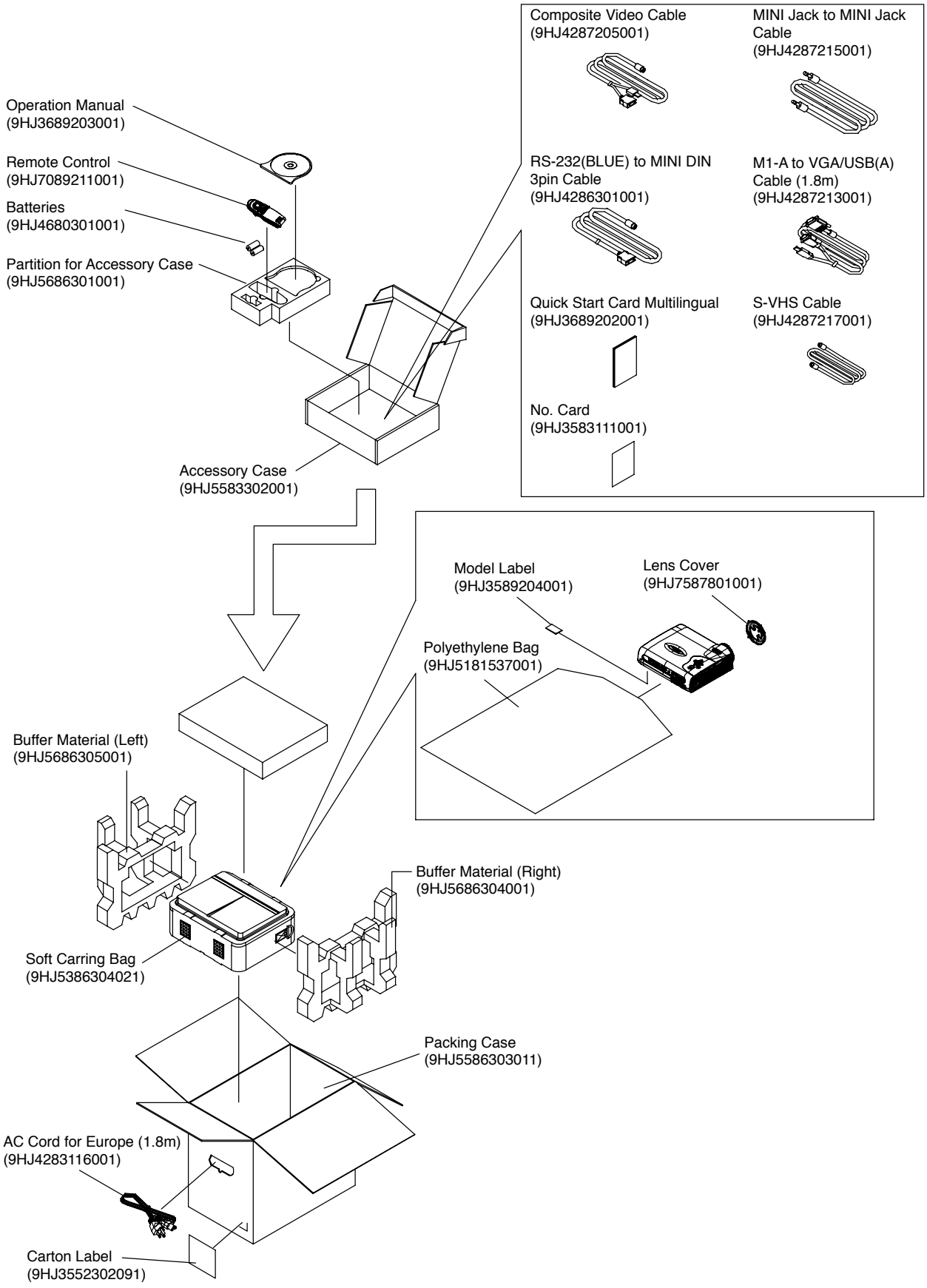
PACKING PARTS
(NOT REPLACEMENT ITEM)

Ref. No.	Part No.	★	Description	Code
	9HJ5586303011	-	Packing Case	—
	9HJ5686304001	-	Buffer Material (Right)	—
	9HJ5686305001	-	Buffer Material (Left)	—
	9HJ5583302001	-	Accessory Case	—
	9HJ5686301001	-	Partition for Accessory Case	—
	9HJ5181537001	-	Polyethylene Bag	—
	9HJ3552302091	-	Carton Label	—

SERVICE JIGS
(Use for servicing)

Ref. No.	Part No.	★	Description	Code
	9HJ4286301001	J	RS-232(BLUE) Cable for FW Upgrade, MINI DIN 3pin 1800mm	AQ
	9HJ4283618001	J	RS232 Cable for EDID data Writing, MINI DIN 3pin 1800mm	
	9HJ4753402004	J	AC Adapter for EDID Data Writing, IN:100V-240V OUT:5V 2A 12V2.3A	
	9HJ4285804001	J	M1-A to VGA Cable 1.8M (Analog) for EDID Data Writing	
	9HJ4285805001	J	M1-A to DVI Cable 1.8M (DVI Digital) for EDID Data Writing	
	9HJ4785801001	J	DFP to DVI Adapter for EDID Data Writing	
	9HJ8000001001	J	PWB for EDID Data Writing	
	9HJ4289201001	J	Extention Cable 120pin, Main PWB to Formatter PWB	

PACKING OF THE SET / VERPACKEN DES GERÄTS



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